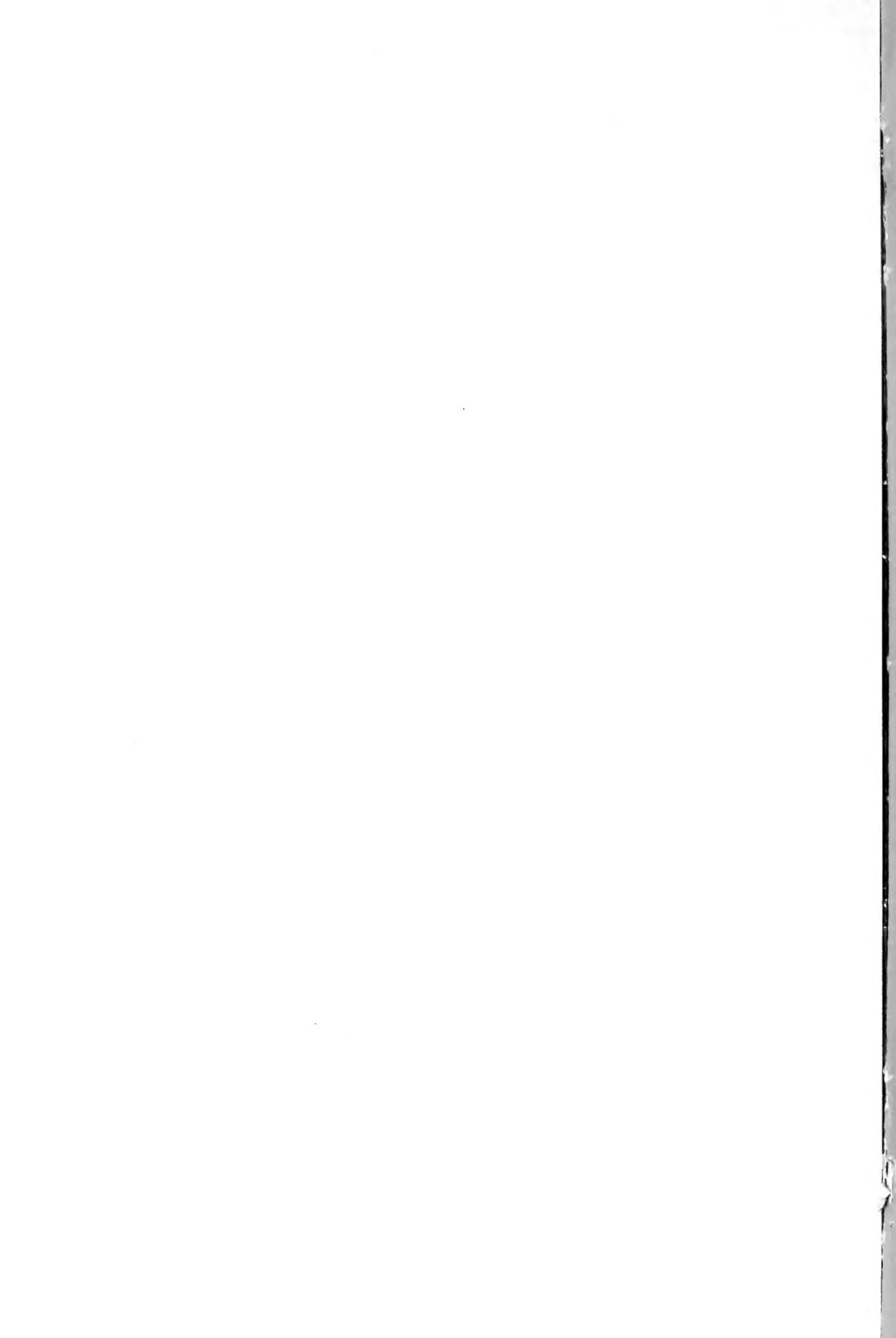


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J. R. Ratekin & Son's

Eighteenth Annual

Seed Catalog

1902



Farm, Field and Garden Seeds

Shenandoah, Iowa

ESTABLISHED 1877.

THOS. H. READ, Prest.

E. A. READ, Cashier.

J. F. LAKE, Ass't. Cash.

THE FIRST NATIONAL BANK.

SHENANDOAH, IOWA.

CAPITAL AND SURPLUS \$100,000.

Shenandoah, Iowa, Dec. 1, 1901.

To Whom it may concern:

This is to introduce to your favorable notice Messrs. J. R. Ratekin & Son, of this place.

Mr. Ratekin, Sr., has been a valued costumer of this bank for many years, and has always been esteemed by us as a reliable and trustworthy man in every respect.

He has now associated with himself in business, his son, J. W. Ratekin, who is an active, energetic, and worthy young man, and we bespeak for the new firm a large share of confidence and patronage of the business public.

Respectfully, T. H. READ, Pres. First Nat. Bank.

Omaha & Saint Louis Railroad, Shenandoah Station.

Shenandoah, Iowa, Jan. 3, 1902.

To Whom this may concern:

I take pleasure in saying that I am personally acquainted with the members of the seed firm of J. R. Ratekin & Son, the senior member having made the growing, handling and shipping of seed corn a specialty here for the past sixteen or seventeen years, and they have been among the largest shippers in recent years over the Wabash railroad, also the Omaha, Kansas City and Eastern, "Quincy Route," each of which I have been associated with as agent at this place. Indeed during the past year or two this firm has made more single shipments from this point over these roads, than any firm or business house many times multiplied. During all their years in the seed trade here, I have never heard a complaint from any patron or customer of theirs from any cause, and I have no hesitation in saying that I believe them to be gentlemen of integrity, and any one having business transactions with them may feel assured of fair and honorable treatment.

Respectfully, H. C. Bedison.

What the Postmaster of Shenandoah Says:

U. S. Postoffice.

Shenandoah, Iowa, Jan. 3, 1902.

To Whom it may concern:

I take pleasure in saying I have known Messrs. Ratekin & Son, of this place, for many years and can recommend them as trustworthy, energetic business men. Mr. J. R. Ratekin, senior member of this firm, has been engaged in the seed corn business here for many years and has sold and shipped large quantities of seed corn to all parts of the corn growing country, including many different states, and I have never heard any complaint from any customer.

Respectfully submitted,
C. N. Marvin, Postmaster.

Office of C. M. Conway, Groceries, Provisions and everything to be found in a first-class Grocery Store.—Shenandoah, Iowa, Jan. 1, 1902.

To Whom this may concern:

This is to certify that I am well acquainted with the seed firm of J. R. Ratekin & Son of this city, and take pleasure in recommending them to the public, as being reliable and trustworthy.

C. M. Conway,
Mayor Shenandoah, Iowa.

To Our Friends and Patrons.

With the beginning of this year 1902, we are pleased to hand you our new annual catalog of seed corn and all kinds of farm and garden seeds, and with it our best wishes for a prosperous and happy new year, and to thank those who have favored us from year to year with their seed orders and liberal patronage and their kind words they have spoken for us, a few of which we will publish in our book.

In making up our catalog we have tried to make it as comprehensive as possible, at the same time avoiding exaggerated descriptions or overdrawn illustrations as given by many other seed houses.

From our first beginning in the seed business in 1884, it has steadily grown each year and is today as large if not the largest seed business, in our lines, to be found in the United States, our business extending to every state and territory in the UNION, last year. There must be some good reason for this, and it lies in the fact that our seed corn and all farm and garden seeds are strictly pure and true to name, are unsurpassed, **not seed that has been carried over from year to year**, that our prices are right and that we please and satisfy our customers.

OUR LOSS BY FIRE. On the night of February 20th, 1901, we had the misfortune to lose our seed house by fire, it burning to the ground, destroying every seed in our house as well as burning up over one-half million pieces of our printed matter, machinery, etc.

OUR NEW SEED HOUSE. Owing to our greatly increased business, requiring still larger storage and shipping facilities to promptly execute all orders as well as more room for our large force of labor we employ to hand pick all our seeds, we have just completed our new seed house which is as large if not the largest of its kind in the world, it having floor space in all of over 18,000 square feet, with average depth of 15 feet.

QUALITY OF OUR SEEDS. They are all new and fresh, all grown in 1901, and we know when you plant our seeds you are planting the purest and best seed to be had, and our prices are as low as good fresh seed can be sold for, and when we cannot produce the highest quality we will discontinue the seed business.

And Now, we want your kind order for whatever Farm, Field, or Garden Seed you may need for the coming season; whether it be large or small it will be taken care of in the same prompt manner and always have our best attention.

A Few Words About Ordering.

Our business and trade is direct with the farmer and corn grower and vegetable raiser, who can order as easily, buy as cheaply, get the same freight rate as any one else, and **we assure all who favor us with their orders, that they shall have our prompt personal attention, and the seed will be shipped as directed on same day order is received.**

GUARANTEE. We exercise the greatest care in the selection of our seed and send out nothing but pure varieties and of the strongest vitality, and if any seed received from us is not fully satisfactory on receipt and examination, it may be returned at our expense and money paid for it will be refunded, but we give no warranty, expressed or implied, and will in no way be responsible for the crop.

Directions for Ordering.

OUR TERMS ARE STRICTLY CASH WITH ORDER. We do not send C. O. D. as cost and inconvenience to you for collection and return charges is an unnecessary item of expense; besides it would require too much time and help and cause delay of shipment while we obtained the standing of those who order that way. As to our responsibility see inside first cover page for references.

HOW TO SEND MONEY. Remittances may be made at our risk by any of the following methods, viz: Postoffice Money Order, Bank draft, Express Money Order, Registered Letter, and in sums of \$1 and less in postage stamps.

The rate for Postoffice and Express Money Orders is now very low and these are the most convenient modes for sending money, consequently the best to most of our customers. Express Money Orders can be obtained at all express offices and from all agents of different companies everywhere. All these ways of remitting are absolutely safe and at our risk.

SHIPPING. We are located on the C. B. & Q. Railway, Omaha, Kansas City, Quincy and Eastern Railway and also on the Omaha & St. Louis line of the Wabash Railway and on the Humeston & Shenandoah Railroad, this place being the western terminus.

Use our blank order sheets when convenient and you have them. Always be sure to **write your name plainly**, also your postoffice address, county and state. Don't think because you are familiar with all of them that everybody else is. Therefore don't write them in a careless manner.

Be sure to give the name of your freight station, also name or names of railroads.

FREIGHT RATES AND CHARGES. We advise our customers to order early and have their seed sent by freight always, as it **costs four times as much** by express, as by freight. We have excellent railroad shipping facilities, and direct connections at Omaha, Council Bluffs, Des Moines, Ottumwa, Burlington, Davenport, Rock Island, Chicago, Toledo, Peoria, Quincy, St. Louis and Kansas City, besides innumerable junctions and crossings with trunk lines, and we generally reach most points in Iowa, Illinois and Nebraska, in two to four days; Missouri, Kansas, Michigan, Indiana and Wisconsin in from two to six days; Ohio, Kentucky, Tennessee, Louisiana, Texas, Oklahoma and Indian Territory in from four to ten days. In fact we are able to reach most any railroad point in the United States in ten days, as we have fast through freight arrangements to many points, and with a system of tracking, we can prevent unnecessary delays at transfer points, from one railroad to another, and thus materially lessen time in transit.

RUSH ORDERS. If time is limited and you wish to order seed of any kind by telegraph, go to your Banker, Express Agent or Postmaster and put up the money and have them wire us what you wish, and you may feel assured that your order will have immediate attention and seed will **start by first train**. We know how to move without a derrick, and are in a position to give you prompt and rapid service.

We are But Human.

We take Pride Always in Trying to be Correct in all Our Shipments. However, we are but human, and occasionally make mistakes like other poor mortals, but when we make a mistake we want to remedy it. If in the course of business with us, you find an error or mistake on our part, please write us a letter with a plain statement of facts, and you may depend upon receiving honorable and pleasant treatment. Don't get angry and come at us like a hog going to war. We pride ourselves on having a large warehouse full of patience, but are not indifferent to facts pleasantly stated, and separated from abuse.

Freight and Freight Rates.

We have obtained through our several railroad agents here, freight rates to 38 leading points, which will serve as a guide to approximate the freight rate from here to your nearest railroad station. The prices given for seeds of all kinds include bags free aboard the cars here, **but we do not pay freight in any case**, except the money is sent with the order to prepay it here, which is necessary if you have no railroad agent at your station, as railroad companies will not accept goods for such stations except they are first prepaid at starting point. In such cases where there is no agent, the parties ordering should always send money to prepay freight, and if more is sent than it costs it will always be returned to the sender.

In all cases where you want seed of any kind, whatever, in pound quantities, we can pack and send them safely and securely in a bag of corn, and will be pleased to do so, and you can therefore deduct **eight cents per pound**, from the pound prices, the amount of postage it would cost us if sent by mail.

Remember that express rates are about four times as much as freight rates, therefore don't neglect to order early and in plenty of time.

Remember always, that we ship seed same day order is received, and send shipping bill at same time; if to be shipped any time in future we always acknowledge order by first mail. Very respectfully,

J. R. RATEKIN & SON.

Shenandoah, Iowa, January 3, 1902.

Rates on Seed Corn, in bags, per 100 lbs., at this date, from Shenandoah, Ia.

Atchison, Kansas.....	22c	Memphis, Tennessee	42c
Atlanta, Georgia	94c	Macon, Georgia.....	94c
Burlington, Iowa.....	24c	Mobile, Alabama	88c
Buffalo, New York.....	47c	Nashville, Tennessee	57c
Chicago, Illinois.....	32c	New Orleans, Louisiana.....	67c
Cincinnati, Ohio.....	42c	Ottumwa, Iowa.....	11c
Council Bluffs, Iowa.....	9c	Omaha, Nebraska	11c
Cedar Rapids, Iowa.....	39c	Peoria, Illinois.....	29c
Clinton, Iowa.....	43c	Quincy, Illinois.....	27c
Decatur, Illinois.....	30c	Richmond, Virginia.....	59c
Davenport, Iowa	27c	Springfield, Illinois.....	29c
Detroit, Michigan	45c	Springfield, Missouri.....	37c
Dallas, Texas.....	97c	Sioux City, Iowa.....	31c
Evansville, Indiana.....	42c	St. Louis, Missouri.....	27c
Indianapolis, Indiana.....	41c	Terra Haute, Indiana	39c
Kansas City, Missouri.....	20c	Texarkana, Arkansas	79c
Lincoln, Nebraska.....	24c	Topeka, Kansas	32c
Louisville, Kentucky.....	42c	Vicksburg, Mississippi	67c
Little Rock, Arkansas.....	75c	Wichita, Kansas.....	53c

Buy your Seed Corn from the grower. Then you will know where it was grown.

The American farmer feeds the world better than he feeds himself. Farmers ought to be the most prosperous people on earth, for they feed and clothe more people than any two nations in the world. They produce the stuff and the people of the earth must have it and pay good prices for it. In this country one man can grow food enough for a hundred persons. No other people in any age can or ever could do as much. One reason he is not better off is because he does not regulate prices for his products. Gamblers do that for him.

It is a splendid way to round out a life by getting square with the Lord. The man who is on speaking terms with the Lord can speak to every neighbor, and no mistake. In order to have the very best neighborhood all the neighbors should be on this kind of speaking terms both with the Lord and with each other. A church in the neighborhood is a very good thing to have, but it is not of much account without some Christianity.

"Quality Before Quantity."

"The best is always the cheapest." Reliable seeds above all else, especially seed corn, gives and lays the foundation for a good and perfect crop. They cannot be produced nor sold at half price. Poor seed is dear at any price or even as a gift, and we do not attempt to compete on prices with grain dealers, common elevator corn and novices, without experience or conscience. Therefore we try to produce the best seed from the best varieties and shall continue to make **quality** not quantity, paramount to all else, believing as a practical business proposition, that it is the best and largest return that gives the most satisfactory and profitable results for the money invested. We have made our prices as low as possible consistent with the care and preparation of high grade and reliable seed. Our prices are absolutely alike to all, and when you send to us for seed you have the satisfaction of knowing that **no one gets seeds for less than you do**, from us.

More than fifty years practical experience on the farm as a corn raiser in one of the best corn growing sections under the shining sun, **eighteen of which have been devoted to the growing and handling of seed corn as a specialty**, has given us a direct practical business experience with thousands of the best corn growing farmers all over the country, especially with those of the great corn growing belt of the Central, Western and Southwestern states, thus bringing and keeping us in close touch with the best, most practical and progressive farmers of the United States, thereby deriving much beneficial knowledge from their experience. From these long years of experience we have found the essential points most desired are seed that will **grow**, a pure variety of uniform good size, with no barren stalks, not of the overgrown Jumbo sort, but with 16 to 24 rows, deep grain and as small cob as consistent to bear them, thus drying out early and quickly, and combining all the essential points to obtain the largest possible yield of the soundest, solidest and best corn in the shortest length of time.

Since 1884 when we first engaged in the growing and handling of seed and **more especially seed corn**, our trade and business has gradually and steadily increased year by year when last year (1901) reaching the climax over any previous year, aggregating and reaching into tens of thousands of bushels of seed, and by far greater than any like seed house to be found in America.

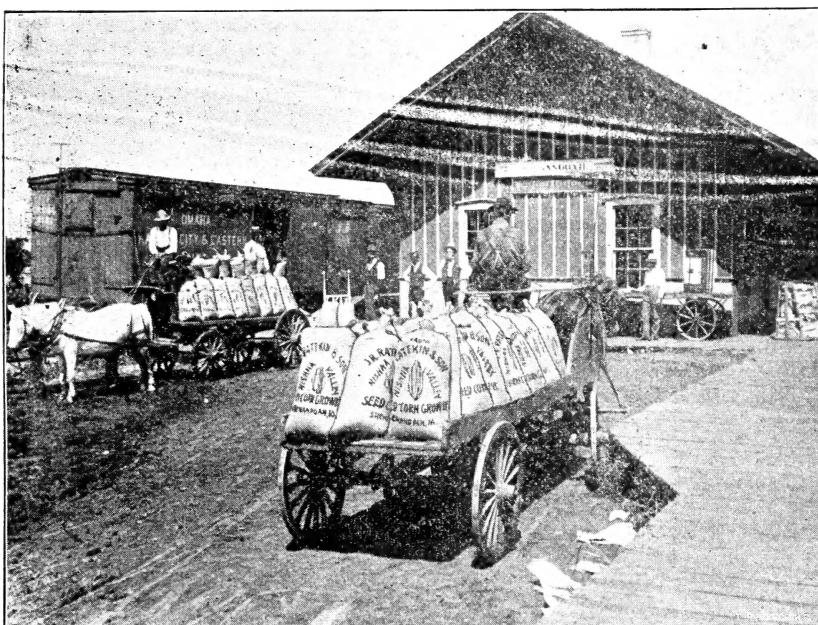
In Iowa alone, our home state, where the record of the most corn and largest yield per acre was made over any other state for 1901 and 1902, as well as many years before, as shown by government report, we received orders from and sent seed into every county without exception, and to most every railroad town and hamlet in them. To Illinois, Indiana and Ohio we likewise sent seed to every county within the borders of the state. From Arkansas, Kentucky and Tennessee we received orders from 90 per cent of all the counties of those states. From Nebraska and Kansas we received orders from every county in state where corn is grown. From Oklahoma and Indian Territory we shipped seed to every county in those states, and in Texas, alone, we received orders and sent seed to 115 counties and to over 3,000 farmers in that state. We could go on telling you of our wide trade last year but room will not permit, but in all we received orders and sent seed to every state and territory in the United States, as well as Canada and Mexico.

Smoking seed corn will do it no harm. It has a tendency to keep squirrels from working on it. They do not dislike it altogether but they will not dig it up as readily as they will corn that has not been smoked.

Grainfield, Kansas, January 6, 1902. J. R. Ratekin & Son. Dear Sirs.—I am one of your pleased customers, having bought some of your Silver Mine white corn in 1900 and last fall, 1901, I sent to you for some of your Turkish Red winter wheat. It, like the Silver Mine seed corn, was first class. I shall want some seed this coming season, therefore would thank you for your new catalog for 1902.

Very truly yours,

M. Dargitz,



LOADING EIGHTEEN CARS SEED FOR TEXAS.

What Our Home Papers Say.

"J. R. Ratekin & Son, the widely known and wide awake seed firm of this place, are loading and starting eighteen cars of their seed corn to the following Texas points, where they have sold to dealers and club orders, in car lots: Celeste, Whitewright, Sherman, Van Alstyne, Commerce, Gainesville, Collinsville, McKinney, Bowie, Paris, Terrell, Alvarado, Ennis, Corsicana, Waxahachie, Waco, Dallas and Brownwood. The seed with which these cars were loaded was of a beautiful strain and varieties of their well known "**Iowa Silver Mine**," "**Pride of Nishna**" and "**Imperial**" (white) which are well adapted to a wide range of conditions including all portions of the central and southern corn growing sections and has given universal satisfaction everywhere, as evidenced by the great number of orders and shipments they have already received and made.

They sold and shipped seed corn to 115 counties and to over three thousand farmers in Texas last year, and as a result from it they have sold something over fifteen thousand bushels in that state up to the present time.

This firm grows their own seed and in growing, handling and sending out nothing but the best grade and quality of seeds, and knowing how to treat their customers well, have built up an enormous trade throughout the central, western and southern states.

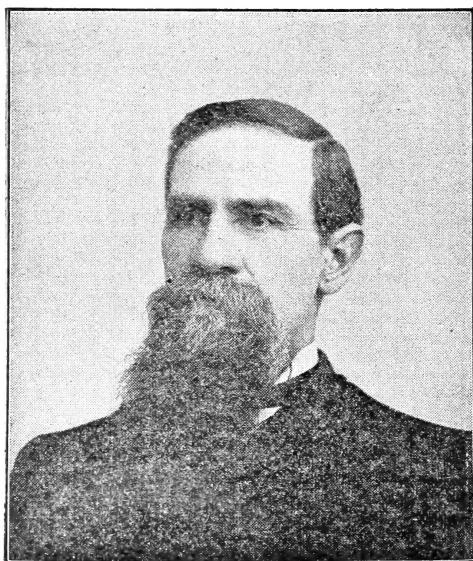
Their manner of conducting business is one that always commands implicit confidence, as they send out nothing but the purest and best varieties. They have always made it a rule to guarantee their seeds to please their customers, and seldom if ever have a complaint from any cause whatever."—*Shenandoah World*, January 7, 1902.

Promptness in filling orders is very essential with a private trade in farm produce. It is one of the golden keys to success. If an order is sent, do not wait until some of the family are going to town, but send someone at once.—**E. E. Rockwood.**

Our Conscientious Aim

Is to reach the farmers, the corn growers and the vegetable growers all over the United States, from north to south and from east to west, and to lay before them a few **practical hints** and **suggestions** with regard to the advantages of good farming and thoroughbred seeds, as well as to call attention to the value of a change of seed from one locality to another.

Plants, like animals, have their characteristics developed by selection and environment. As to animals no intelligent breeder and grower doubts this for a moment. A little observation will convince any one that qualities are as firmly fixed in plants as in animals. Hence the possibility of improvement.



COMPLIMENTS OF J. R. RATEKIN.

But in order to make the most practical gain in life, it is not only necessary to know how, **but to make proper selections and practical application**, and this principle of more proper selections was never in **this world better exemplified** than in the **corn crop of Iowa**, in 1900 and 1901, where the power of the whole agricultural press of this state put on every pound of steam for five months last winter and year before, as they never did before, urging and advising farmers and corn growers of the importance of better ways, better cultivation, and above all, better **SEED** to commence their crops with. What's the result? A million bushels more in 1900 than ever before, and this year a larger Corn Crop Than Any Other State In This Union.

If you wish to improve your Corn crop, Wheat crop or Oats crop by changing seed we can do you good, and solicit your orders. If you desire any special advice write us stating kind of soil, up-land or bottom land, as well as object to be obtained, and we will tell you which kind to order.

Whatever kind of seeds you are going to need for the coming season, whether it be seed corn, seed wheat, oats, garden or other seed listed by us, we offer you the very best varieties at living prices, together with low freight rates, (see front of this book for freight rates to different points,) which will serve as an index governing rates to your place.

Remember our prices are absolutely **alike** to all, so please don't waste time

in writing for lower prices. It's **quality** and **not price** you are **interested in**, as poor seeds are dear at any price even as a gift.

We always aim to make the ordering of seeds from us so pleasant and profitable to our customer's that they will always remember us when in want of anything in the seed line, and have no hesitation in commanding us to their friends and neighbors, as hundreds have done in the past. Every customers order, large or small, is treated exactly alike, or just as we would like to be treated were the transaction reversed and we in their place and they in ours. We ship seed same day order is received, or as directed, and mail shipping bill by first mail after shipment, or acknowledgment if shipment is not to be made at once; if you do not hear from us after a reasonable length of time



COMPLIMENTS OF J. W. RATEKIN.

write us giving full details of your order, as your order or letter may have gone wrong, or you failed to stamp your letter, sign your name and postoffice address and give shipping directions plainly.

In conclusion permit us to emphasize the fact that **our trade and business has been built up and conducted strictly with the farmer**, thus they have got their seed direct from the grower, and therefore know where they were grown and whom by, and to know this when they get seed from

at least some seed houses, would require that they be either a prophet or a mind reader. In our business experience we have had scores of requests from seed houses to quote prices for large quantities, and at seasons, early and before the farmer trade began, have made prices on such quantities, at a figure that left almost absolutely no profit to us in order that we might give and keep our help employed until such time as our farmer trade begun, but in no instance, except one above mentioned have we ever been able to quote **prices low enough** to compete with common crib corn, bought up over the country, regardless of kind, sort, variety or quality, after which it was shoveled into the cars and shipped to these seed houses and given a big name, and then sent out at fabulous and extortionary prices.

We unquestionably have the best location, finest, live, deep, loam soil and most perfect seasons and climate for growing seed corn here in the "Nishna Valley" of Southwestern Iowa, to be found in the world, where all the conditions will permit of early planting and early maturity always attended with dry, pleasant weather up until near Christmas and sometimes much later. But in our experience these are not all the requirements to obtain the best high quality of seed corn. It requires the best pure varieties, the same as in breeds of stock. This should be propagated with a well defined purpose, planted for seed purposes and improved if possible from year to year. Then corn for seed should be handled and cured for seed purposes, thoroughly dry and kept dry. Most of our corn here will grow if properly cared for at picking time, but put into common corn cribs where it may become damp from snow, rain and various conditions of weather, while it may all be seed corn, or corn that would grow if tested today, a sharp, solid freeze of a day or two while damp, and not a grain in a thousand will grow. It's cooked; it's done. Finally comes the selecting, sorting, nubbing and examining of each and every ear, and this can be done one way only, by hand, by competent and trustworthy men, men of practical experience and that are experts in that line of business, and to insure this, precaution must be used in the employment of competent inspectors to see that all is well done. To do this properly requires time, and is among other things one of the important items in the business. On this point we plead guilty to the charge of "crank" but believe we are no more cautious on this point than every practical farmer ought to be; for "on the seed depends the crop;" "no seed, no crop;" "poor seed, poor crop;" "but with good seed half the crop is made to start with." We fully realize the ruinous effect of poor seed. The corn crop is the main dependence. The preparation and growing of a corn crop consumes time and labor and can be grown but one time in the whole year. Some people quibble about ten cents on the price of a bushel of seed. This is economy at the spigget while the bung hole flows. The reduction of 10, 20 or even 50c on a bushel of seed means but three-fifths or seven cents per acre for the seed it takes to plant it, a poor to half crop means a loss of \$3, \$5 to \$7 per acre in final results. This is not a mathematical problem that requires a mathematician to solve. Figure it up for yourself.

We would thank you very much to call the attention of your friends or neighbors to our seeds, tell them our "little book" will be mailed to them for the asking.

Montgomery County, Mo., Jan. 9th, 1902. J. R. Ratekin & Son:—I bought four bushels of your "Pride of Nishna" seed corn last spring and planted it on the same day, along side by side with my other corn. At first I thought the other corn grew more rapidly and I almost felt sorry I had sent off to Iowa for seed as I thought my own corn was better than the corn bought from you. As you doubtless know, all our corn here was poor this year, on account of the terrible drouth, but when I came to gathering my corn, I found the seed planted that I got from you was very much the best, and made much more than corn planted from my own sorts. I could tell to the row where your corn set in. Kindly send me your new catalog for 1902.

Very truly yours, J. W. Dunlap.

Buy your Seed Corn from the best seed corn growers direct and don't experiment with cheap grade crib corn from Seed Commission companies.

The Seed Corn Question

Not for years has good, sound seed corn been so scarce as it bids fair to be for next spring's planting. On this account farmers should not delay the matter of securing such seed as they may expect to need, but should give the subject proper attention. In this connection we desire to direct attention to the well known seed corn specialists, the Messrs. J. R. Ratekin & Son, of Shenandoah, Iowa. The writer recently visited this firm and was greatly surprised to learn that they will be so well fixed to supply the demands of their customers. Realizing that the demand for seed would be heavier than usual they exerted extraordinary efforts to put themselves in shape to accommodate their many old and new customers. Immediately following the loss of their office, etc., by fire last season they constructed a new building which as a seed house is one of the most modern, convenient and complete in all of its appointments we have yet seen. It is apparently perfect in its plans, every detail being worked out so as to promptly and economically handle their business in such a way as to satisfy the most critical observer that the Messrs. Ratekin in building this plant have profited at every point from their past years of experience. From the engine room to the office there are indications on every hand, of a perfected working system, which must certainly have its influence in promptly filling orders and, what is still more important, supplying seed which they will stand behind with their well established reputation. On account of the unprecedented drouth of last season, prices on all farm products have almost doubled, and for this reason and the further reason that corn at all fit for seed purposes this year is extremely scarce and the expense of producing it, handling, going over, selecting, sorting, nubbing, tipping and getting out seed of first-class quality, uniform in size and appearance, is more expensive than ever before. But in determining and fixing their prices for the coming season, the Messrs. Ratekin have kept but one single object in view, namely: "Highest grade and best quality of seed that can be produced at any price." Each and every ear is carefully gone over, all small and imperfect ones being discarded, and none but best and most uniform ears taken: however, before any ear is thrown to the seed pile, it is first carefully examined and inspected, then if found all right the butt and tip ends are taken off, two or more inches at either end, thus leaving only the best and most perfect kernels. Messrs. Ratekin say: "We are in the seed business and not in the grain business, and we cannot, and do not attempt to sell and send out common, ordinary and mixed varieties of good common No. 2 corn and call it seed corn." While on this point we wish to state a recommendation for the quality of the Ratekin seed is the fact that their refuse and discarded corn goes on the commercial market and grades Number 2. They further say: "Seed corn is our specialty and has been for the past eighteen years, and by always making our seeds of the highest grade and best quality it is possible to attain from the best varieties that are grown, we are pleased to say, and say without boasting in the least, that for the season of 1901 we received orders from every state and territory in the Union, besides quite a large number of orders from both Canada and Mexico. We sent out more seed corn than was ever before sent out by any single seed grower, seed firm, or seed house in the world in one season, and we stand ready to show sack bills, and railroad shipment with any house in America." This business and their trade has been built up further on the basis of fair and honorable dealing, and they say: "Out of our thousands of customers we have never left one displeased if we knew of his troubles, if any from any cause." Their new announcements, offering seed for sale, will be found elsewhere in this paper.—Iowa Homestead, Des Moines.

HARPER, ILL., January 8, 1902. J. R. R. & Son.—I bought two bushels of seed corn from you two years ago, and found it very good indeed, but on account of the severe drouth last year I have no corn that I want to use for seed and will want to buy some seed from you again this year. Send me your best prices, also samples of different varieties, with descriptive matter. Very truly yours, H. F. Kampmeir.

The Wheels are Turning.

J. R. Ratekin & Son had their large seed plant in full running order Tuesday morning last, starting their large force of men to sorting and selecting seed for their trade the coming season. This firm had about 125,000 bushels of corn grown under their own supervision this year, the largest amount ever handled by any such concern in the United States. When the corn is received it is thrown into their large drying houses and after thoroughly dried is taken to their sorting rooms where their large force of experienced men examine every ear carefully, seeing that it is perfect and after taking off butt and tip eads it is then taken to the inspection room, where they have an expert to examine and inspect the seed and if found all right, is then thrown into conveyers and carried to the shelling room; from there it goes to the seperator where the dust and chaff is blown out by two large blowers, from there to cleaners where every particle of light grain is taken out and from there it goes to their sacking bins; there it is sacked for shipment.

Everything about this plant is in first-class shape, all being built new the past summer, and in building, every convenience was provided for their enormous business. Mr. Ratekin, Sr., is a practical farmer of over fifty years practical experience on the farm, and for the past eighteen years has made the growing and handling of seed corn, seed wheat, oats, and other farm seeds a speciality. He understands every feature of it thoroughly and the large business they do is an indication that their experience is valued by the farmers all over the United States.

Messrs. Ratekin & Son's new seed house is without question, one of the largest and most commodious seed houses of the kind in the world, and we are glad to see these signs of prosperity everywhere—as indicated about this plant. It is one of the largest institutions of this city and we wish them abundant success.—Shenandoah World, January 3, 1902.

What One of Our Customers Say in Wallace's Farmer

The Seed Corn Question

The seed corn question is to me, as it has been for thirty years one of great interest, and I hope you will keep up the agitation until corn planting season. I have just ordered a sack of seed corn from the Nishna Valley Seed House, which valley I think the best corn land in the world. I should have ordered more but three years ago I bought five bushels and it is too good a variety to lay aside until a better is assured. I have just shelled a half bushel, thirty-five ears, and the corn weighed twenty-nine pounds and the cobs six. This year, however, the corn blew down badly in roasting ear and it did not grow any larger nor longer afterwards. The ears are not so large as other years, hardly any over ten inches long nor are they filled out well, but it made sixty bushels. I want an ear to taper just as little as possible.

Last spring I tested our seed three times, taking one grain from each of a hundred ears. In one test ninety-nine grains grew and each of the other times every grain grew. I shall test a grain from every ear of the seed ordered this year and will plant nothing but what will grow. I believe there is a difference of ten bushels per acre between good and poor seed.

I have always taken a row of grains off the but and a half inch off the tip and I cannot see but that it fills out as well as when the whole ear is planted. I wish every farmer in our good state took Wallaces Farmer and read it.—D. W. MOORE, Warren County, Iowa.

O'NEIL, NEB., December 2, 1901 J. R. R. & Son:—I planted some of your seed corn obtained from Mr. P. J. Lawnsworth of Agee, last spring. It is the best corn I raised this year and the best in this neighborhood. Kindly give me price on four, six, eight and ten bushel lots of your "Pride of Nishna." Very Truly Yours.—HARRY W. STANTON.

Seed Corn, Growing and Choosing Seed Corn

The following rule and guide is so eminently reasonable, logical and correct, and conforms so completely to our plan that we allow another to give it as his own, and most heartily command it to all corn-growing farmers.—J. R. R. & Son.

Line upon line is written every year upon this important subject by men who grow a large acreage, says L. A. Stockwell in "Iowa Homestead." One goes into the field early, husks out the well formed ears, that riven first, and that are the right distance from the ground. Another selects the largest and best ears he can find in his crib at planting time. Nine-tenths of all the corn planted is selected in one or the other of these ways. Those who select the ears while in the field are careful not to take an ear from a smutted stalk. Why so? Evidently because they think the resulting crop must be smutty. Now let us walk through the corn field with a man who selects his seed when the first husks begin to turn. Here the corn is all around us. Here is a nice large, early ear. It is picked and put into the sack. The next is passed; it is too high up; the next is too small; the next has smut on either the stalk, the ear or tassel. It is passed. The next is picked; then two or three nubbins, then a stalk that is entirely barren is passed, and so on through the field until the sack is filled. The farmer husks it, hangs it up in a dry, airy place away from rats; and feels that he has made a good beginning toward next year's crop.

But has he? Look at the growing stalk of corn for a moment. The organs of reproduction consists of a tassel and the silk. The pollen, light and feathery, made so for a purpose, is carried by insects or the wind, from the tassel of one stalk to the silk of another. Every farmer who has planted two varieties of corn side by side knows that they will mix; they will mix even for a long distance. This being the case the big ear, selected from the nubbing, or the smut affected ears, or the barren stalks, is liable to be fertilized by pollen from one of them, perhaps from all three. Now, if like produces like, and this farmer thoroughly believes that it does when it comes to horses, cattle, sheep or hogs, is not his future crop bound to be greatly lessened by using such seed? **He knows that a thousand pound mare bred to an 1,800 pound Percheron, will raise a colt not so large as its sire, nor so small as its dam, but somewhere along about half-way between, depending considerably upon its keeping. But he does not believe that his big ear, weighing sixteen ounces, will be reduced in size.** He thinks that big ears can be gotten by small sires, though he knows **big horses cannot.** If you should ask him if that was his belief he would no doubt deny it. But, if **actions speak louder than words,** the average farmer believes that large corn can be grown from **badly sired seed.** How, then, should we select our seed? Don't select it, but grow it. In other words plant a small plot of the best seed you can buy, and plant on a distant part of the farm, where it will be as far as possible from other corn. Cultivate well and as soon as it is seen that some stalks have fallen behind and are going to be small cut them out. Watch closely and cut out every stalk that is not up to your ideal of what a stalk should be, before it tassels. From this corn select the type that approaches nearest your ideal of perfect corn. Plant in the same way for your next seed crop. Try this plan and you will be surprised at the increase of your yield on the same land with the same cultivation.

ARIVACA, ARIZONA TERRITORY, December 13, 1901. Messrs J. R. Ratekin & Son. Gentlemen:—Your very kind favor of the third at hand and I beg to say that I received my order of seed from you last spring complete, and notwithstanding your misfortune by fire, my order received prompt attention. The "Iowa Silver Mine" white corn did fine but yellow corn did not stand the severe drouth so well. Shall want some seeds for the comming year and will thank you for your new catalog when same is printed. I thank you very much for kindness shown, and thoughtfulness in writing me, and beg to remain, Very truly yours.—W. M. MARTENY.

Corn Growing

How to Prepare the Land, Choice of Seed, Method of Cultivation, Harvesting the Crop, Saving the Fodder, Etc.

CORN IN MISSOURI.—J. R. RIPPEY.

The estimated acreage to corn in 1899 was 6,330,000 acres and the yield 183,000,000 bushels, an average of less than thirty bushels per acre for the entire state. While this average, considering the cold, wet, unfavorable seed time and the drouthy conditions that prevailed during Aug 1st and September and the great variety of soils and conditions to contend with over so large an area, is fairly good, can it not be largely increased by better methods of cultivation and more care in conserving soil fertility and moisture. At an average price of twenty-five cents per bushel, rent of land from \$2.00 to \$4.00 per acre, labor \$1.00 per day without board and the additional expense of keep of team and the wear and interest on machinery and harness, it is doubtful if thirty bushels per acre will prove remunerative. If not, then the farmer that produces less than that amount has lost money, or at least has not received a reasonable compensation for his labor and expense.

The seeding of corn is an investment, the returns from which are largely in the hands of the farmer. True, there are insect pests and climatic conditions that he cannot control but he may conduct his farming operations so as to reduce these evils to the minimum. In the first place the seed should be selected with the greatest care; better this be done in the fall, taking only well matured ears of the desired type, have them well cured out before placing in bulk and then placed where rats and mice cannot destroy. The farmer should remember "no seed, no crop," that a well-cared-for grain will develop a more vigorous plant than one that has been sapped of much of its vitality; that this vigor is necessary to rush the plant above the young weeds and hasten the period of cultivation. The preparation of the seed bed must not be neglected. Whether the ground be broken with a turning plow, then pulverized with the disc or harrow, or if the lister and drill be used, there is only one successful way to do it and that is to be thorough in every operation. The plowing should be deep, all the ground should be cut and all vegetation or old matter should be turned under with it. The soil must be pulverized not only on top, but deep down and through. Don't attempt to deceive yourself or the corn plant by a little loose dirt and a smooth surface on top while the ground is cloddy below.

When the plant is up, cultivate at the earliest moment practical. Don't wait for the weeds to grow. Stir the ground that it may keep them from growing, and that moisture, absolutely essential for the growth of the corn plant, may be conserved by the loose soil mulch you have prepared on the surface. Keep on cultivating when opportunity offers. Never let a hard crust of soil form nor a coat of weeds grow if possible to avoid it. Remember that the corn plant is a surface feeder, that its roots seek nourishment near the top of the ground and should not be disturbed. Deep cultivation may not reach these at first. Later on it must be avoided, but the field must be kept free from weeds and the soil mulch maintained as long as you can get through the field without injury to the plant.

The farmer will find it unprofitable to attempt to produce corn on land where the fertility has been exhausted. A miner would not think of paying ten dollars for working a ton of ore that would yield but four. The cultivation of an acre of poor soil that will yield but twenty bushels will cost as much, generally more, than a fertile acre that will yield sixty. If followed, the one will bankrupt the farmer, the other will make him prosperous. It is probable there are but few acres of ground in Missouri that under favorable conditions and thorough cultivation would not produce sixty bushels of coin to the acre or double last season's average, after a good crop of clover or cow peas had

been turned under. Leguminous plants grown upon exhausted or thin soils not only make a profitable crop but stir up fertility for those that follow. Soil fertility must not be neglected. Corn on thin soil will never prove profitable. Make the soil what our farmers can make it with the aid of clover and cow peas, and without cost, and the annual production in Missouri will be three hundred million bushels and the yield at least fifty bushels per acre.

Principles of Corn Culture

Select good seed; replanting seldom pays. □ Plant when the oak buds begin to leaf out. White varieties are best for domestic use. The yellow sorts as a rule are richer and contain most nutriment for stock, and adapt more readily to the soil. Large-growing varieties as a rule are late to mature and should be planted on the richest and most moist ground on the farm. Early maturing varieties should be planted on the poorest, dryest, most sandy land on the farm, as such land is most sensitive to drouth.

Most Missouri soils grow both stalks and ears too high. Select seed from low, stalky sorts. To grow new varieties, a cross between two given sorts, plant in alternate rows; as soon as the tassels of silk appear, cut off about seventy-five per cent of the tassels of the most undesirable stalks leaving the balance for pollen for fertilization. Detasseling about seventy-five per cent of the stalks increases the yield.

Plow sandy soil in the fall, harrow and thoroughly pulverize before planting. Clay soil as a rule is best plowed in the spring. Fall-plowed ground, if run together by rains during the winter and early spring, should be replowed or soil loosened with a two horse cultivator. Most ground will produce best if plowed deep with a little sub-soiler under the plow, or followed by sub-soil plow breaking up the bottom of the furrow. If the ground is too cloddy to pulverize with the harrow, use a clod crusher, which is a wooden implement made of three 2x12 inch planks, edges lapped and spiked together eight feet long. Plant with two horse planter, three grains in a hill, one and one-half to two inches deep.

Early cultivation subdues weeds and keeps ground mellow. Plowing and cultivating wet ground as a rule, will injure the soil, but the farmer who has much to plant and cultivate, often cannot wait until all gets in right condition, but he can plow his dryest land first. Such elements as unfavorable weather we cannot control. A great mistake is that some farmers make no allowance for unfavorable weather, and farm too much land. All will admit that two acres well treated will yield more than three half treated or neglected. Weeds have to be subdued to keep them from robbing the corn of moisture. A proper regard paid to the destruction of weeds and thorough cultivation will also increase the fertility of the soil by exposing the surface of the soil to the action of the elements to be made productive thereby. Frequent cultivation will preserve a mellow condition of the surface, so that the moisture rising from below may be held until it can be appropriated by the roots of the plant.—(Jacob Faith, in Journal of Agriculture.)

To do good work in corn raising there are other requisites besides "knowing how." **The most experienced farmer would make but** a poor list of corn growing without the assistance of the seedsman to furnish good seed; and although most farmers save their corn seed from year to year, this, in many cases is carried to excess, and frequent planting of the same seed on the same ground will account for many failures to raise heavy crops. But to the seedsman, after all, is due the improvement of corn varieties; and the experimentation necessary to the development of new and better sorts is due entirely to the labors of the seedsman who are ever on the alert to produce or introduce what they believe to be improvements upon older varieties. Then comes an equally important factor in the production of a profitable corn crop, viz., the makers of the various improved implements which play so important a part in the tillage, cultivation and final stages of the growth and the harvesting of the produce. With the latest improvement in plows, seeders, weeders, listers, etc., etc., in corn growing—for this great boon we are indebted to the progressive implement makers. Many of their productions should be carefully studied by the wide awake farmer.—J. R. R. & S.

Successful Corn Culture

Any one can grow corn after a fashion, but for best results aside from proper weather and climatic conditions, there are four other essential elements all of about equal importance, that must be combined in order that success may be assured. They are a good farmer, good soil, good seed, and good culture.

A Good Farmer

It is said that "the result of warfare depends very largely upon the men behind the guns." This is equally true of every other human endeavor. The successful growing of a corn crop is no exception. "He that by the plow would thrive must either hold or drive," is as true as it is old. In this day of advanced agriculture success can only be obtained by a good knowledge of the underlying scientific principles.

The chemical and mechanical conditions of the soil, the physiology of plants, as well as the philosophy of cultivation and plant growth, must be well understood by the farmer in order that he may be able to meet and overcome the ever varying conditions that confront him, identical conditions not returning once in a decade. Having the knowledge he will know when, how and for what purposes he cultivates. To illustrate, suppose the soil seems quite fertile but is inclined to run together and pack hard on the least provocation and is very hard to keep proper tilth. It shows that the soil lacks humus, vegetable mould or as some call it, fiber. The remedy is to apply a heavy coat of coarse litter, such as coarse manure, such as straw or stalks cut fine or a heavy crop of some green stuff plowed under. Any way to add decayed vegetable matter to the soil.

Or, suppose there is too heavy growth of stalk, vines or branches, and a light crop of grain or fruit. This shows that there is too much nitrogen compared with the other elements of fertility. The thing to do is to add phosphoric acid and potash to restore the proper balance, or continue to crop with some rank grower until the surplus nitrogen is taken up. Hence, we conclude the good farmer must be a close observer, a good reasoner, a deep thinker and a prompt executor. But however well informed may be "the man with a hoe" he cannot raise a good crop of corn without good soil.

By good soil we mean a soil that is thoroughly drained of surplus moisture either naturally or artificially, and contains all the elements of fertility, viz., nitrogen, phosphoric acid and potash, and sufficient amount of humus in the right proportions, for the perfect development of both grain and stalk of the corn plant.

The virgin soil of the central west, including all of the upper Mississippi valley region, seems to possess the soil constituents in about the right proportion to grow the corn plant to perfection. The deep, rich mantle of black mould that covers this entire region seems to have been designed by nature for the home of this great cereal—the grain that, more than any other one thing, is making this country famous. A crop that is more valuable than any other single crop. But this great storehouse of nature (the virgin soil) becomes exhausted, (or more properly speaking, unbalanced) in the corn producing elements after continuous cropping for a series of years, and begins to fail. For some reason the nitrogen of the soil is taken up more rapidly by the corn than are the other elements—phosphoric acid and potash. Hence the only thing to do to restore the equilibrium of the soil is to add more nitrogen. This can be done in three ways, viz., by resorting to commercial fertilizers, to the composite heap and barn yard manure, or to growing such crops on the ground as possess the power of extracting nitrogen from the air and returning it to the soil through their leaves, stems and roots. These are what is known as the leguminous plants, such as clovers, vetches and peas. The two former methods referred to are impractical on a large scale from the expense standpoint, hence we must rely on the latter, viz., the clovers. The common, or medium, all things considered, is the best. Sow about eight quarts of clover and the same of timothy to the acre in early spring with Early Champion oats or spring wheat as a nurse crop. If the soil is light, such as is found in many portions of the central west, the clover is best sown real early so the seed may get well soaked by the late snows and early rains.

When the proper time comes, sow the oats or wheat and plow all in together about three inches deep, and harrow thoroughly. By putting the grass seed down deep it prevents, in a great measure, the sun killing after the nurse crop is harvested. Cut the grain crop as early as will do and as high as possible. Your chances are good for a good stand of grass. If you do not get a full stand, in the last of August or first of September harrow the stubble and apply more seed in about the proportion that the other sowing fell short of a stand. Do not be afraid to be liberal in the use of seed. It is the cheapest in the end. It is like feeding live stock liberally. If the soil is what is termed heavy it is better to sow the small grain and plow or spade it in and sow the grass seed on top and harrow thoroughly. It is best not to pasture the young clover the first year, especially not until the seed is ripe. If you have the live stock and do not want the hay, the best thing is to pasture the field off closely several times during the second summer. The accumulations of manure from the barns and feed lots could be very profitably used on this ground after the oats or wheat was harvested, by spreading so thinly on the poorer parts that the grass would not be smothered. If the plan outlined has been a success, we have sufficient nitrogen in the soil to produce several crops of corn much above the average. This brings us to the third element in the production of a corn crop—

Good Seed

By good seed we mean that which has been handled so that all of its germinating power has been preserved, aided by a constitutional vigor implanted in the grain by a judicious selection, cultivation and environment that produces a pure or improved variety. This may be done by the common farmer but is generally best done by the professional seed corn grower. He generally knows better how to do this, and has the proper facilities for doing the work. This is (or soon will be) a business of itself.

The variety should be grown that matures readily in an ordinary season in your latitude. Remember, a small, ripe ear of corn is better than a large green one, and with proper management about as many bushels of small or medium corn can be grown on an acre as there can be of a large variety. Most of the large yields have been made with medium varieties.

Every corn grower should have access to three sizes of corn—large, medium and small. If the weather conditions are favorable early, plant the largest variety that will mature in your locality. If for any reason you are delayed ten days or two weeks, as is sometimes the case, plant the early or medium variety. Or, sometimes it is desirable to have real early feed; in this case plant the early first. Plant some improved sort. If you do not have the pure seed, procure it of some reliable seed corn grower. On the subject of good seed the writer once heard the best seed corn grower in central Iowa remark: "As a bushel will plant eight acres, I would rather pay eight dollars a bushel for good seed than plant the common seed as a gift." Remember that the mere fact that corn will germinate is not sufficient. A stunted stalk of corn is like a stunted calf. It takes all summer to get to growing. There is also a difference in the constitutional vigor of different varieties of corn. Hence, if you have not a desirable variety of corn and do not thoroughly understand how to save your seed, you will do much better to get your seed corn from some good reliable seed corn grower who does. Good seed is as important as good culture.

N. J. HARRIS.

A Good Stand of Corn

Every farmer would like to have a good stand of corn. What is a good stand of corn? Most men will say that an average of three stalks to the hill is a good stand. A good stand of corn consists of an even distribution of the stalks over an acre of ground and not an average of so many stalks to the hill. Six stalks in one hill and nothing in the next will make an average of three and yet the results would be very unsatisfactory. I would rather have two vigorous stalks in every hill than to have an average of three all over the field with skips, making them from nothing to five. More mistakes are made by having too good a stand than is usually believed. Many farmers believe in "getting a plenty while they are getting," and for that very reason they plant thick and forget or neglect to thin.

J. R. RATEKIN.

Corn is King

The United States has a monopoly on corn growing of the entire world. Some corn is grown in southern Europe, some in Argentine, but the United States produces three-fourths the corn crop of the world. More than one-half the corn crop of the United States, and more than one-third the crop of the world is grown in the states of Iowa, Illinois, Missouri, Kansas and Nebraska.

The world's consumption is increasing every year, requiring larger corn crops. Year by year new commodities for corn are opening up daily—people of the world are fast making new uses of it. Time makes many changes. Only twenty years ago people thought corn was of no value only to feed hogs and make whiskey, but today there are more uses for corn than any product grown. It is manufactured into many foods for the human being as well as for the manufacture of glucose, starch, whiskey and many other purposes. European farmers are finding out more clearly every year that corn is the cheapest carbohydrate food that the world knows of. Every year more will be required for the food of the three million head of live stock, which will constantly increase, that are kept in towns and cities. Heretofore the great bulk of the corn has been consumed on the farm and will be, must be, if we are to continue to furnish meats for the world's markets.

Just think on the subject for five minutes. Notwithstanding the large crops of 1898, 1899, 1900 and when the severe drouth visited us last season cutting the yield to one-half that of former years mentioned above it did not take the live stock feeders all over the country long to realize what had happened. That the enormous supply of corn in farmers hands had been consumed gradually, and to keep their stock over until grazing came was taking great chances, consequently they sold them. The railroads could not furnish cars fast enough to get them to market, and after all, that consumption of corn being shut off, did not bear the market price for corn, it gradually rose to a higher level than wheat or any other grain product known. It is the duty of every reader of this article on "Corn is King" to grow as large a crop of corn next year as he possibly can without interfering with the balance of his crops. We do not advise the farmer to grow more acres, but we do want them to grow more bushels per acre as it is only by increased bushels per acre that profits the farmer. It does not cost any more to raise big crops than small ones, and the increased bushels are the increased profits, and we want to particularly state to every reader of this article that you must start at the foundation of every thing, **plant the best seed you can buy**, it takes good seed of strong vitality to have a good stand, and you cannot get a good stand with poor seed.

More than the world knows, the prosperity of the entire country depends on the growing of a large crop of corn, not only next year but for years to come, and there is no subject more worthy the careful study of every careful farmer than how to secure larger crops by increasing the yield per acre; and this can only be done by good seed to start with, and then by proper cultivation. Our fifty years experience on the farm and the past eighteen we have come in communication with the farmers all over the United States has placed us in a position to help the farmer. Buy your seed from the grower, then you will know that it is seed corn and not elevator corn put up on the market as such.

EDWARDSVILLE, OKLA., January 16, 1902. J. R. R. & Son.—Please send me your 1902 catalog. I planted your Pride of Nishna at Shawnee, Okla., last year with most flattering results considering the season. It is all right.—R. C. Fain.

BOONVILLE, BOONE Co., IOWA, January 18, 1902. J. R. R. & Son.—I planted fifty acres of your Pride of Nishna last year that I ordered from you, and it stood the drouth remarkably well, making over forty bushels per acre of fine corn.—W. O. Douglas.

CALE, INDIAN TERRITORY, January 7, 1902. J. R. R. & Son. Gentlemen:—I write you to say that I obtained some of your Iowa Silver Mine white seed corn last spring and planted it in west Texas, and while it was very dry and but little corn grown, I am pleased to say that I obtained more than twice as much from your seed as was grown here by any one from our common native sorts. Very Respectfully, G. M. Boyd.

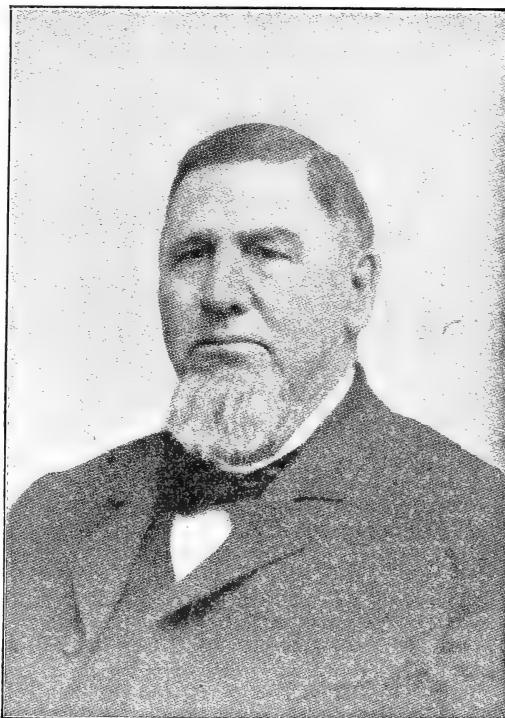
How to Grow Corn

- 1st. Have your land well underdrained.
 - 2nd. See that your land is fertile. Make all the manure possible and then haul some from your nearest town.
 - 3rd. Be very careful in the selection of your seed. The best is none too good.
 - 4th. Never let your stock run on the fields through the winter that you will plant to corn in the spring; not even a sheep or hog. It will tell at cribbing time.
 - 5th. Use a disc harrow on your ground before plowing. This will do away with clods in bottom of plowed ground.
 - 6th. Never allow your ground to be plowed wet, always using a jointer to turn trash under well.
 - 7th. Pulverize thoroughly and if your ground is cared for through the winter as it should be, there will be scarcely any clods. If there seems to be no clods work it over two or three times any way—always leaving perfectly level for planting.
 - 8th. Always check your corn, the ground can then be plowed. Very strong ground will stand three to the hill but two is better.
 - 9th. Never allow a single weed to grow in corn. It robs the corn plant.
 - 10th. Cultivate close and careful the first time, then as the corn plant grows get farther away from it and plow shallow; never disturb roots of the corn.
 - 11th. It is a good plan to cut out all diseased and barren stalks, especially when you expect to gather your seed.
 - 12th. When corn is ready to crib, get it in, never allow it to stand out through the winter.
 - 13th. When husking corn always have a box on the side or back end of wagon bed, and when you husk a ear that is well filled out at both ends with straight rows and deep solid grains, the length of ear four times the diameter, grown on a stalk free from disease, not too tall, with good brace roots to hold it against strong winds, put this ear in your box, it is very valuable for seed.
- By these rules of caring for grounds and selecting seed, we are sure the yield can be greatly increased.

J. R. RATEKIN & SON.

TROY, Indian Territory, January 24, 1902. J. R. Ratekin & Son. Gentlemen:—I am pleased to say that I bought ten bushels of your "Pride of Nishna," yellow, and "Iowa Silver Mine," white, seed corn last spring, and have found it as good as gold. I finished planting on the 24th day of April, and on the first of August I gathered good and perfectly well matured corn from it. My crop from your seed made me more than twice as much corn as from other varieties on the same land with same conditions, and as a result I have about **fifteen hundred bushels** of finely assorted seed that I am selling to my neighbors, many of whom did not grow a bushel per acre of the common varieties. I shall plant about three hundred acres in corn the coming season and shall plant nothing but your "Pride of Nishna" and "Iowa Silver Mine." Thanking you for prompt shipment, and wishing you every success, I am, yours very truly. I. P. LINZEE.

P. S. We wish here to state that the experience of Mr. Linzee is but the same experience and results obtained by many of our customers, except we could give the names of some farmers who bought seed from us last year, who realized over **fifty dollars per acre from the results** of their crop grown from our seed, who have disposed of it for seed purposes to their neighbors and to seed houses.—J. R. R. & Son.



HON. OLIVER MILLS.

The subject of our sketch, Mr. Oliver Mills, has been a resident of Cass county fifty-five years. Prior to that time he was a prominent and honored citizen of Lee county for a number of years, during which time he was a popular figure in shaping the destiny of our great state of Iowa. Mr. Mills was president of the state agricultural society of Iowa for a number of years and helped put it on a firm and permanent basis while he occupied that position.

At one time he was the largest cattle feeder and shipper in the state of Iowa. Owing to his prominent and practical knowledge in lines of agriculture he has repeatedly been appointed delegate by the governor of Iowa, to the Farmers National Congress. For a number of years he represented Cass county as a member of the legislature.

Mr. Mills is a native of Ohio and a personal and intimate acquaintance of the late President McKinley in the boy hood days of the latter. Soon after Mr. McKinley's second election, the president shipped two barrels of apples from his Ohio farm to Mr. Mills, who in turn remembered his old time friend, John T. Stuart, of this city, with a part of these apples; and it is from Mr. Stuart that we have obtained this sketch of Mr. Mills. While Mr. Mills is a customer of this firm, and while we have known of him by reputation for many years, yet we do not have the privilege of a personal acquaintance with him.

While he is now in his eighty-third year he is owner and practically conducts one of Cass county's best farms and takes a deep interest in agricultural pursuits.

What Mr. Mills Says

CASS COUNTY, IOWA, Oct. 20. 1901. J. R. Ratekin & Son, Shenandoah, Iowa. Gentlemen:—Your catalogue and circulars at hand. Accept my thanks for your kind remembrance. My health is still poor and while I am unable to look after affairs in detail, I drive about the farm every day, weather permitting. The seed corn I bought of you last spring was perfect. We planted

our corn from the 18th to the 25th of May, fifteen acres on meadow sod and fifteen acres on stalk ground. Both pieces will yield from seventy to eighty bushels per acre, notwithstanding the terrible drouth we have experienced this season. Perhaps all the credit of our wonderful crop should not be given your seed corn, but is undoubtedly due to vanity and perfect seed. I am greatly pleased with the "Pride of Nishna," as well as the "White Silver Mine." I should be glad to visit your new seed plant, as well as my old time friend, John T. Stuart. Kindly remember me to him Yours Truly.—OLIVER MILLS.

The Largest Yield in Thirty-five Years

Mr. H. J. Lichty, of Blackhawk County, Iowa, writes under date of November 23d, 1900:—I have gathered my corn and think I am conservative in saying that I realized twenty per cent better yield, and results, from planting "Hrde of Nishna" than from common native sorts. I commenced planting May 10th and finished about the 27th, obtaining an excellent stand, verifying the truth of your statement that you corn "was seed corn, not elevator corn." In fact, my stand was too good in any thing. I have never grown corn here as large, as deep grain and small cob, as from the seed I obtained from you



MR. H. J. LICHTY.

last spring, and this is to a large extent where we gained such good results in the increased yield. I have grown corn here for thirty-five years, and I never before obtained **as many bushels of good sound, well matured corn off the same amount of land.** The experience of some twenty other farmers that I furnished this seed to, is similar to my own. It matures fully as early as any of our common native sorts. While on a visit down in Brown county, Kansas, this fall, I met Mr. Uriah Saylor, who bought seed from you six or seven years ago, and has been growing crops from the corn he originally got from you ever since, and his crop this year is simply immense.

In 1901 it Stood the Drouth and Done Better than Ever

WATERLOO, Iowa, Jan. 2, 1902. Messrs J. R. Ratekin & Son. Gentlemen:—I wrote you last year with regard to the seed corn, and results from it, that I bought from you in 1900. As you know, this year we suffered from the

most severe drouth ever before known; this considered, I am pleased to say that results were even more satisfactory than last year, as **I grew seventy bushels per acre of your "Pride of Nishna"** this year of as sound and well developed corn as was ever produced in any season and when husked, by the bushel as it was, it weighed out more bushels than by measure. I have often heard farmers talk about every stalk producing at least one big ear, and sometimes two, but I have never before found any other variety of corn that would do that well for me, but I have found the corn I got from you to be an exception and it is no exaggeration when I say that this is one characteristic of your "Pride of Nishna." Every stalk bears one good ear and many of them two well developed ears of good sound corn. To say that I have been pleased as well as profited, to the extent of several hundred dollars by the investment made with you for seed, is but a very conservative statement: for I know of several of my nearest neighbors with as good land as my own who did not get to exceed twenty-five or thirty bushels to the acre this last season, and I am sure that I am not selfish enough to have captured some of the fleeting showers that we all craved so much, but failed to get.

Wishing you every success and a happy and prosperous year, I am, very truly yours.—H. J. LICHTY.

P. S - We have not the pleasure of Mr. Lichty's personal acquaintance but have known him as a customer, and by reputation for many years as one of Blackhawk county's leading citizens and most substantial farmers, whose word means character and credit by all who know him.—J. R. R. & Son.

To the Man Who Plants the Corn

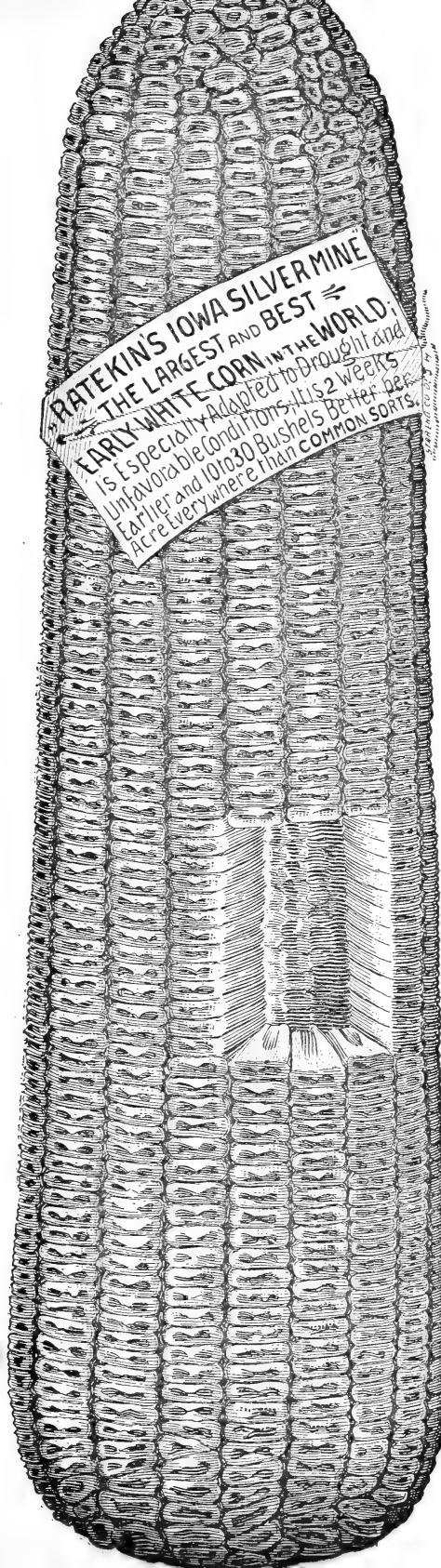
During our eighteen years experience growing and handling seed corn as a specialty, we have observed many freaks, as well as fakes and fakirs, who have appeared from time to time and advertised and offered seed corn for sale. Usually they were never before heard of, and would never after be known except for the injury they have done to those who patronized them. These fellows usually offer great inducements in the way of cheap prices; "just as good as anybody's seed," etc., etc. This brings us to the point where we venture to say that cheap and inferior seeds can always be bought at cheap and reduced prices, but they are not only dear at any price, even as a gift, but are always ruinous to the man who plants them. We have had a thousand farmers tell us and write us their experience with regard to results of their crops from seed bought of these fakirs; saying that their seed in many cases had cost them from \$10, \$20, \$30 and as high as \$40 per bushel in the results of their crops. Since one bushel of good seed corn will plant about seven to eight acres this statement is not at all unreasonable. By the loss of one-fourth to half crop or yield, they would have obtained from good seed of good varieties, they lost more than enough to have paid for good seed at \$25 per bushel.

We cannot and do not undertake to compete in price with any one, but first try to make the best quality of seed that can be produced at any price; then fix our prices in harmony with the cost of producing such seed. All our seed is carefully sorted and selected and nothing but largest and best ears used for seed, and each and every ear is carefully examined as to vitality, and butt and tip ends taken off before shelling and sending out. It is **seed corn**, not mixed sorts of elevator corn.

In addition to what we have already said, allow us to suggest that when you buy your seed corn from us or other reliable growers, then you know somewhere within a thousand miles of where your seed was grown, which of itself ought to be of some interest to the "**man who plants the corn.**"

J. R. RATEKIN & SON.

NEPONSETT, Bureau Co., Ill., January 25, 1902. J. R. R. & Son:—Please advise what you can furnish me 50 to 100 bushels of your seed oats at, also mail me your 1902 catalog. I bought my seed corn from you last year and am well pleased. It made all the way from forty to as much as eighty bushels per acre, and the best corn that was grown in this vicinity; considering the season I thought this a remarkable yield, and am well pleased. Very truly yours—JOHN SMITH.



Ratekin's "Iowa Silver Mine," White Seed Corn

A Record Unequalled "Iowa Silver Mine" white corn was first introduced less than ten years ago, and is now better known to the farmers and corn growers of the United States than any other variety of corn that has ever before been introduced or brought to the attention of the public; this from the record it has made and the universal adaptability to every condition incident to corn growing everywhere.

During the last ten years this variety of corn has been exhibited at about every county, State and national exhibition or corn show of any significance in the United States, and during that time has uniformly won first premium and prizes in every contest wherever exhibited. At the great Illinois corn show it won **eleven of the best and leading prizes** offered, in competition with any and all varieties of every kind, color or description, **competition open to the world**, and has stood pre-eminently at the head of all varieties at the Iowa experimental station for years as the best white corn tested at that station.

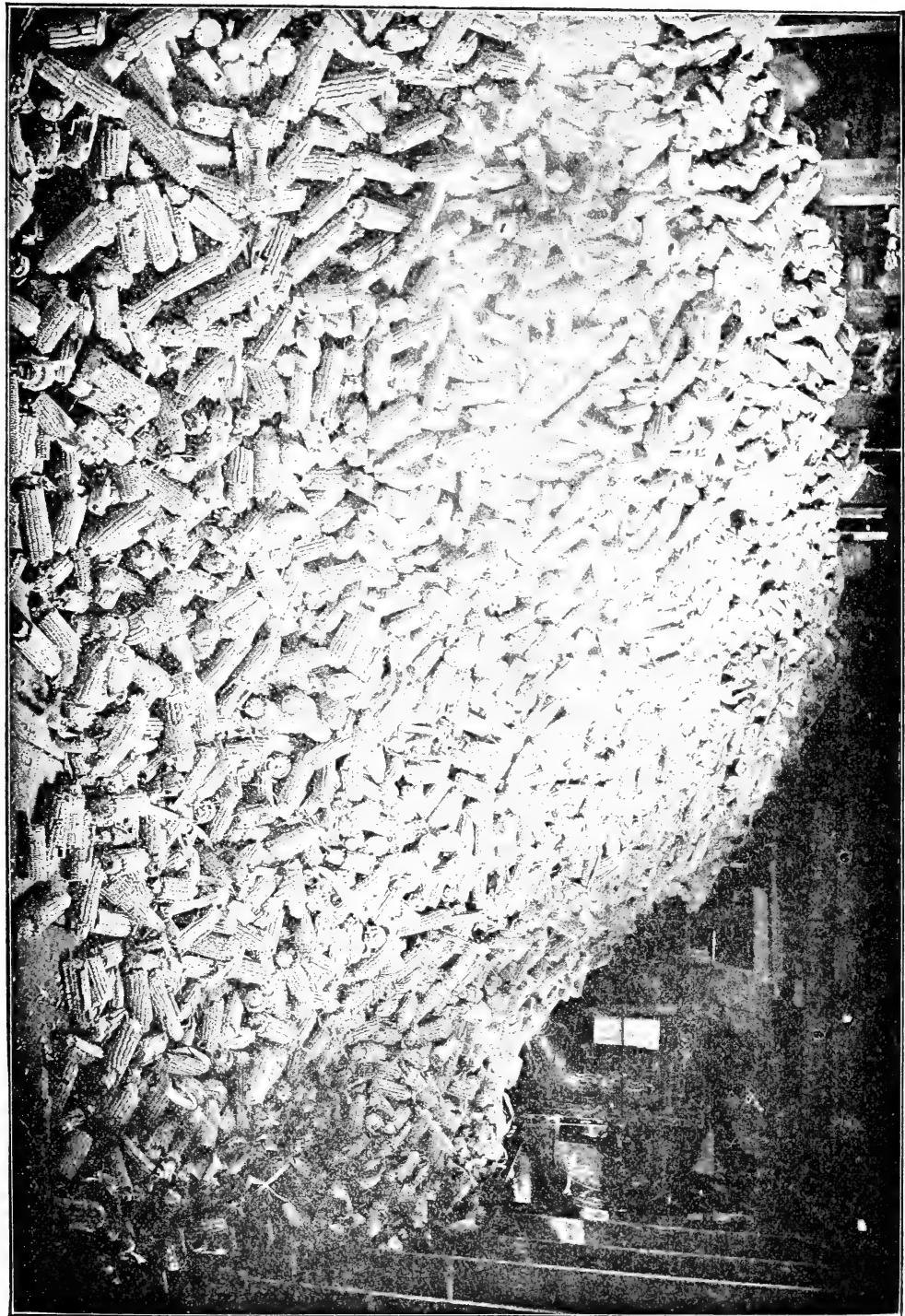
Iowa Silver Mine Corn

Iowa Silver Mine is unquestionably the most marvelous variety of corn ever grown or seen and one that will happily surprise every one who plants it. This corn was first introduced in this state in the spring of 1894, eight years ago, and in that short length of time it has almost revolutionized the corn growing of the state of Iowa. Think of it, only eight years since this variety of corn was first introduced. Today there is not a variety grown in the United States that is so familiar to every farmer as Iowa Silver Mine, 2½ bushels to the acre with ordinary culture. We don't blame some practical farmers for looking incredulous when this is mentioned. When we first heard of this we could not believe it. But the statement was verified from a source that we could not discredit, and since then has been re-verified repeatedly. Just put on your thinker and think of it. The average corn crop of the United States was about 26 bushels per acre for the year 1900, and about the same for the two preceding years. There was over seven times this amount of Silver Mine grown on one acre. Brother farmer, would you like to grow this kind of a crop? You may not grow as much as this premium crop developed, but by planting "Iowa Silver Mine" on either light or heavy soil you can double your crop yield over common scrub sorts, and we assure you that you will make the best investment of your life for seeds, by getting enough of this superior and excellent seed corn to plant your entire crop for the coming season.

We have more than fifty thousand bushels of this variety of corn for our trade for the coming season of 1902, selected from as fine strain as can be found in the world, and it went into our drying house in as good condition as corn was ever put up. There will be such a demand for it this year as never before and we want every farmer who reads this "book" to grow at least a part of his crop to Iowa Silver Mine, and we want you to order your seed today; **order it before the rush comes, and before you neglect and forget it or lose our address.**

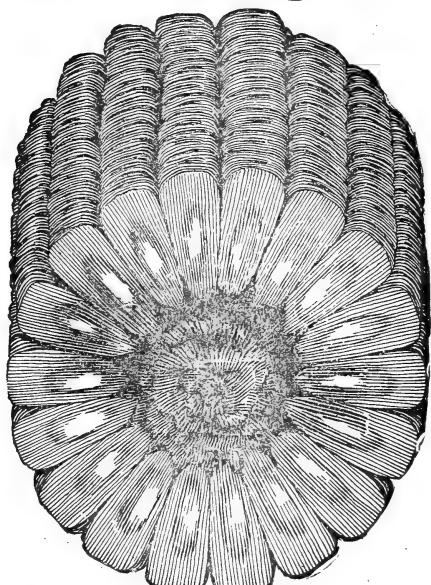
Description

Stalks grow to height of 7 to 10 feet, dependent on location and soil, and sets the ears about three to four feet from the ground, just the right height for husking. One peculiarity in this corn is, that there is never any barren stalks, every one has an ear and many of them two good ears. The originator says that has been characteristic with it every year since he first produced this variety. The cut shown on preceding page represents a typical ear of this superb variety of corn and was photographed especially for this book. The type of this corn is very even and uniform; ears measuring from eight to twelve inches, and about seven inches in circumference, weighing one and often as much as one and one-half pounds is not uncommon. Like the ear photographed and shown on preceding page, they are of very uniform size and shape, with sixteen or twenty deep rows (usually eighteen) of pure, deep, white kernels set on a small white cob. It is early matured, last year in ninety days from the time it was planted. The cob dries out rapidly so that it is ready for market or cribbing earlier than any large white field corn in existence. In its yield it will surpass all other varieties of any other kind or color. Seventy pounds in the ear will shell sixty-two pounds of corn to eight pounds of cobs. It is adapted to a wider range of soil and climate than any other sort of corn offered. From Minnesota to Florida and from Massachusetts to California, it will yield a paying crop where other kinds are grown at a loss. It is in every way a distinct type of corn: **order today while you have it in your mind,** then you will have it when you need it. Remember that the freight is about the same on two bushels as it is on less quantities, as railroad companies usually charge for one hundred pounds for anything less than that much and after that in proportion. Price, \$1.75 per bushel; 5 bu. or more, \$1.70; 10 bu. or more, \$1.6 ; bags free, on board the cars here.



Showing How Every Ear of Seed is Prepared Before Shelling

Our "Imperial" White Corn



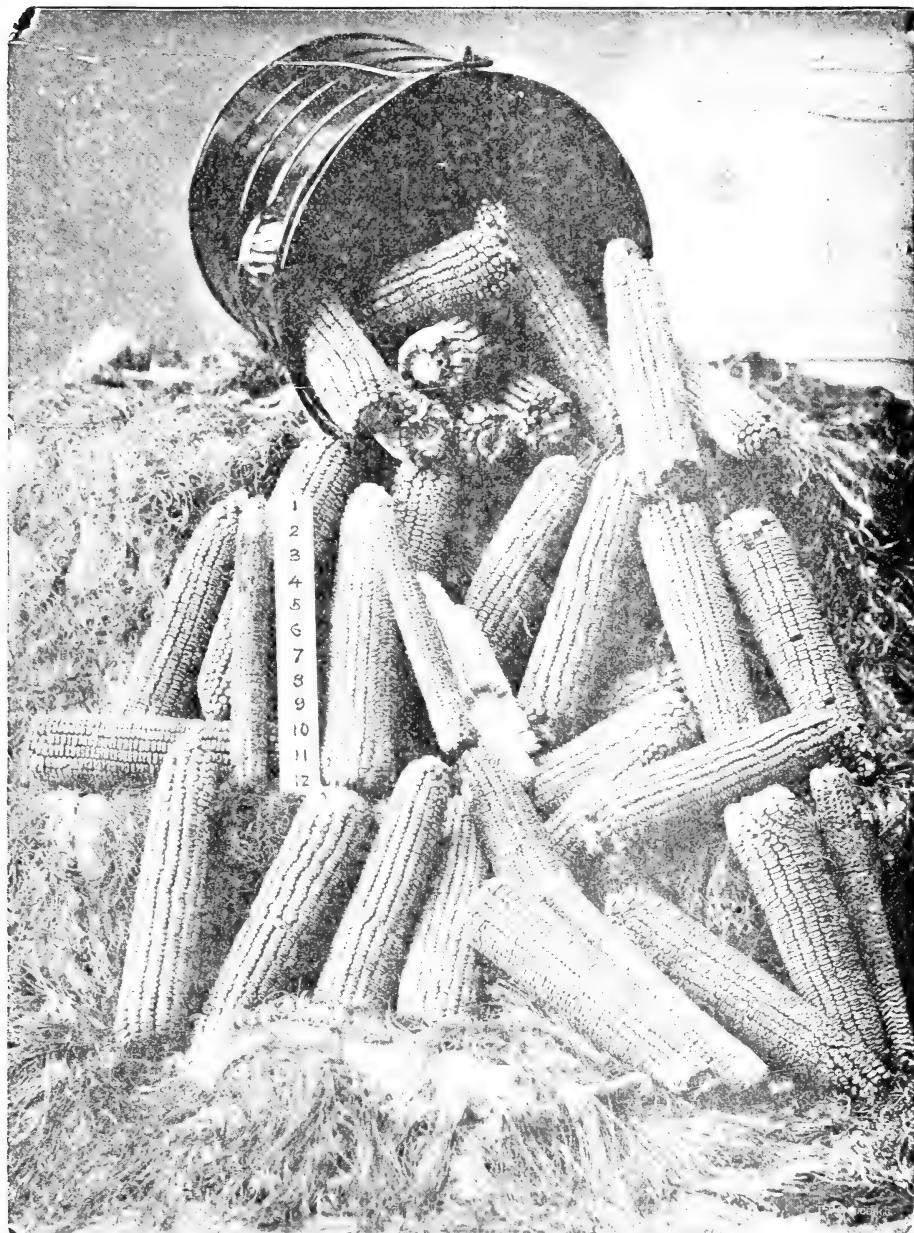
Imperial White

Implicit confidence, always a sure and big cropper. On account of its vitality and adaptability to all conditions we have christened and named it "THE IMPERIAL;" the monarch and supremely the strongest variety of white corn in existence. It is pure white corn with red cob; a sign in itself of great vitality, and during the unprecedented drouth of 1901, wherever it was planted from Texas to Minnesota, and from Nebraska to New York, it stood the intensity of the drouth and burning sun better than any other known variety in existence. On good strong corn land it is the equal of any variety grown, and will make as many big bushels per acre as any other known sort, and on poor soil, or under unfavorable conditions it has no equal. The ears run from nine to twelve inches in length, and about seven inches in circumference, with from sixteen to twenty-four rows, deep grains solidly set on a medium sized cob, not unusually hard but solid and compact, and will weigh out three or four bushels more to the common wagon box of shelled corn than any ordinary variety.

It's the corn for every farmer to plant; always a sure cropper, a big ear yielder and the best grade and quality of corn that is grown. Owing to the wide demand, manifested everywhere, not alone in the United States but throughout the world—where corn is rapidly being introduced for its food purposes, white corn will continue to command a premium of from two to five cents a bushel over yellow corn. Cereal mills the world over want white corn. To have it and get it you must plant and grow it. The enhanced and advanced price paid for pure white corn everywhere will alone pay for the seed it takes to plant the ground four fold, saying nothing of the surety of a crop from our Imperial over all other sorts.

Only three short years ago, we were having a demand for six bushels of yellow corn to one of white; now we are getting orders for two bushels of white to one of yellow. Why? Because farmers are fast learning that our white varieties command a better price, will withstand unfavorable conditions better, and are always a more certain cropper than the yellow varieties. In short, white corn is always more **profitable to the "man who plants the corn."** Don't fail to include in your order a few bushels of our Imperial white. You will make no mistake in planting largely of it. Price per bushel \$1.70; 5 bushels and over \$1.65; 10 bushels and over \$1.60. Bags included free.

This most excellent and superior variety of white corn has been grown here in the Nishna Valley for the past ten years, with the most remarkable and uniform good results, always maturing safely and soundly in from 90 to 100 days, and making big yields where other sorts were a failure. This variety of corn was introduced here some ten years ago from Illinois, by an old German farmer, and on account of its uniform and remarkable yields it soon became a favorite with many of our largest and best corn growers in this vicinity. During the past four years we have been sending out small quantities of seed to every state in the Union where corn is grown to any extent at all, and to all other localities where we have sent other varieties. This in order to thoroughly test its adaptability to a wide range of conditions, including climate, soil and other things incident thereto, and we have found from our experience that there is no variety of corn in existence that can be relied upon with more im-



Pride of Nishna. The above cut represents a true photograph of basket of ears of our "Pride of Nishna" yellow Dent corn. This corn is pure and thorough bred, and is one of the best varieties of yellow corn in the world. It was planted and grown with great success in every corn growing state of the union in 1901, including every county in five of the leading corn growing states, without exception. It is of great vitality, withstanding drouth and unfavorable conditions much better than ordinary sorts. See next page for full description, etc., etc.

"Pride of Nishna"

It returns yields that please, profit and astonish you. It is the best all around variety of yellow corn grown. For a number of years we have been watching this most excellent variety of corn which was originated here in the Nishna Valley by one of the leading and best corn growers in this state.

This corn is the result of a cross and hybridization of two well known sorts, made about fifteen years ago, since which time by careful selection it has been bred up to the highest degree of excellence. Its type and characteristics have become thoroughly fixed, and it is as pure a variety as can be found and we think has as many or more real points of virtue than any yellow variety of corn we have ever seen.

The stalk is strong and vigorous with dark, heavy foliage with a deep, heavy root and is of great vitality, withstanding drought to a wonderful degree. One of the most marked characteristics of this corn is that it never has any barren stalks. Every stalk has at least one large, well developed ear and many of them two good ears of golden yellow corn. The ears are remarkably uniform in size, color and shape, measuring about seven inches in circumference and ranging from nine to twelve inches in length, with from sixteen to twenty-four rows of very deep, solid grains to the row set solidly on a medium small sized cob. This corn is undoubtedly the earliest large eared corn that this country has ever produced. It will mature in 90 to 100 days from time of planting. The purpose of the originator was to produce a fixed type of large eared corn that would mature the largest yield of the soundest, best corn that could be matured safely in from 90 to 100 days, and in this he has succeeded admirably well. It is an enormous yielder on good rich soil and at the same time gives a yield on poor, thin soil that no other corn does. The ears are well filled from butt to tip. It is easy to husk and easy to shell. The original cross and fertilization made was a congenial and suitable one, for growing a distinctively new type and variety of corn. It is like a vigorous young man of strong parentage, full of new blood and new life. It is full of vigor full of oil and vitality and grows strong from the start. It has all the qualities to withstand drought and unfavorable conditions. It is as natural a yielder as weeds, and many of our patrons report they grew bushels where others grew pecks. It will yield equal to or more than any other variety in the world under like conditions. If you want the golden yellow it's the corn to plant. We cannot too highly recommend this variety, it will not disappoint your best expectations. We know what it is. The cut on page twenty-five is a correct representation of this excellent corn and was made for us from a photograph for our use and fully represents the character of this superior variety of corn, and we have no hesitation in fully recommending it to our customers, and we hope every farmer and corn grower who reads this will plant at least a part of his crop to this most excellent variety. Price, by freight or express at purchaser's expense, reck 50c: half bushel \$1.00; one bushel \$1.5: 5 bushel or more \$1.75; 10 bu. or over \$1.75; bags free aboard cars here.

Remember, that our prices on seed are alike to all. These prices include bags free aboard the cars here, purchaser paying freight when seed is received at his station. In making our prices we have made them as low as good reliable seed can be sold for. Cheap and inferior seed can always be bought at cheap and reduced prices, but we make quality, not quantity, our standard of measure.

No doubt many novices, amateurs, and others without practical knowledge, experience or capability, will copy after our "book;" in fact, we have personal knowledge of those now waiting to obtain a copy of our book as soon as out of print before printing their own effusions, in order to get copy to go by, and thus palm off their catalogs as their own productions. Kind reader, should you see some of them, you can draw your own conclusions.

"Ratekin's Queen of Nishna"

Yellow, Eighty Day Corn

This corn is the earliest known sort of Dent corn grown, and is very much like Pride of the North, except our strains are greatly improved over ordinary sorts of it, and having them selected and grown especially for seed purposes. We have used every known method in breeding this corn up to obtain the highest standard and grade known in the perfection of the extra early varieties of field corn, and we have obtained that measure in this corn. The ears run from seven to ten inches in length, usually about sixteen rows of good, well proportioned grains, solidly set on a small red cob, and is of a golden yellow color. It is well adapted to the northern climates, as well as the south where they often plant after the small grain crop has been harvested and taken off the ground it supplies the place of the Mexican June corn in the south, and Pride of the North and other extra early varieties in the extreme north. **Prices**, \$2.00 per bushel; 5 bu. or over \$1.95; 10 bu. or over \$1.90; bags free, aboard cars here.

Ratekin's Extra Early, White, 80 Day Corn

This is exactly the same type of corn as above except color. It ripens eighty days from planting time, and is a valuable variety for every farmer to plant. If planted early it will mature before drouth comes; and if planted late will stand the hot blighting winds and drouth. **Price**, per bushel \$2.00; 5 bu. or more \$1.95; 10 bu. or more \$1.90; bags free

Stowell's Evergreen Sweet Corn

For full description of this wonderful variety of sweet corn see page 44. No field or farm crop is so valuable as Stowell's Evergreen sweet corn.

We Grow Our Own Seed

If you want pure stock of Iowa Silver Mine corn, remember that we grow our seed from the finest and best strains, and that when you buy your seed from us it can be relied upon as pure stock and sure to grow, and that it is neither commission house, seed house nor elevator corn, but pure stock, carefully selected, sorted, and nothing but best ears used for seed, each of which is carefully inspected as to vitality, and butt and tip ends taken off before shelling, thus leaving nothing but best and most uniform grains for seed. **It is seed corn, not cobs for seed.**

BEN CREEK, Ellis County, Texas, Jan. 24, 1902. Messrs J. R. Ratekin & Son. Gentlemen:—I received the seed corn you sent me and planted it on the 25th day of March last year. We had no rain here after the 24th of April, but I am pleased to say that from your seed every stalk produced one good ear of corn, while other sorts absolutely made nothing. There are several of my neighbors that want some of your seed, as well as myself, and would be pleased to receive your 1902 catalog, also advise me what your seed corn will cost us laid down at Waxahachie. Write me also about your "Early Champion Oats." I may want some of them for sowing the com'ng season. An early reply will much oblige. Very truly yours,

W. S. PERRIGO.

ROBERTS, Potter County, Wis., Sept. 23, 1902. J. R. R. & Son. Gentlemen:—You will remember that you sold me eighteen bushels of your "Queen of Nishna" seed corn last season. I planted it and it did remarkably well for me, considering the season. I am now cutting it with corn harvester, and if you have a supply of this variety I will want about the same amount of seed for next year. Kindly let me hear from you at an early date. Very truly yours,

MARTIN HELMA.



Seed Oats

Sow the best seed, don't experiment with doubtful sorts. Our Mammoth White Russian, Early Champion or Lincoln oats are the kind to sow for sure croppers. They are three of America's greatest oats, each variety has been tried and tested for years. Every farmer should sow the best seed and not risk his crop with sorts he knows nothing about. The oat crop was short all over the country this year but our varieties are offered to the farmers in quantities to suit. When planting time comes there will be a scramble for seed oats of all kinds. Buy them now—make your farming pay—there is only one way to do it. Plant the best seed obtainable, no matter what the cost.

Our Improved Mammoth White Russian Oats

Mammoth White Russian oats are a white oat; grow vigorous and with a very strong stiff straw, almost absolutely rust proof. They are always sure croppers and make more big bushels per acre than any other white oats in existence. They are the oats every farmer should plant or grow. Our seed of these oats are of an excellent and superior grade and quality, all thoroughly cleaned and sacked in our two bushel bags. Such seed are worth twice the price we sell them at, as compared with the ordinary sorts even if you could obtain them as a gift. Now is the time to order your seed, then you will have them when you are ready to sow, and you will not have to sow some common or inferior sorts. Order today. Prices, 75c per bushel; 10 bushels or over at 70 cents per bushel, F. O. B. here.

Early Champion White Oats

The Early Champion are without doubt the earliest variety of oats to mature that there is in existence, are of short stiff straw, always standing up well on the richest soil. They have given the largest yield in field tests at the Iowa experimental station and are highly recommended by that station as superior to any other variety on points named here. You will make no mistake in sowing largely of this variety for field and general crop. They always get there while rust gets other sorts. Price, 75 cents per bushel; 10 bushels or over at 70 cents per bushel, F. O. B. here.

. . . Improved . .



These oats are heavy yielders and have proven themselves to be rust proof. They stand up exceptionally well and are wonderful drouth resistors. Order now. Prices, 75 cents per bushel; 10 bushels or over at 70 cents per bushel, bags free, F. O. B.

Manshure Bearded Barley

This is an old well known six-rowed variety introduced by Professor Henry, of the Wisconsin Agricultural Experiment Station eleven or twelve years ago. Since then it has been the standard and most popular barley ever introduced. It has been worth millions of dollars to farmers in the barley growing states. It is a barley of wonderful productiveness and is not surpassed as a heavy yielder. Its malting qualities are unsurpassed, and on this account always commands the highest market price. It ripens early and has strong, stiff straw, with long and heavy heads, filled with plump, nice kernels, which are of a pretty bright color, and will not discolor from wet weather. Barley is in better demand than it used to be, and even at a moderate price it is a good and profitable crop to grow. The Manshure barley yields in ordinary season 60 to 65 bushels per acre, and in favorable seasons has yielded as high as 80 bushels; figuring only 45 to 50 cents per bushel, it is one of the best paying crops. 1 lb. 30c; 4 lbs. 75c by mail. By freight or express, $\frac{1}{2}$ bu. 50c; 1 bu. \$1.00; $2\frac{1}{2}$ bu. \$2.25.

Ratekin's Red Russian Seed Wheat

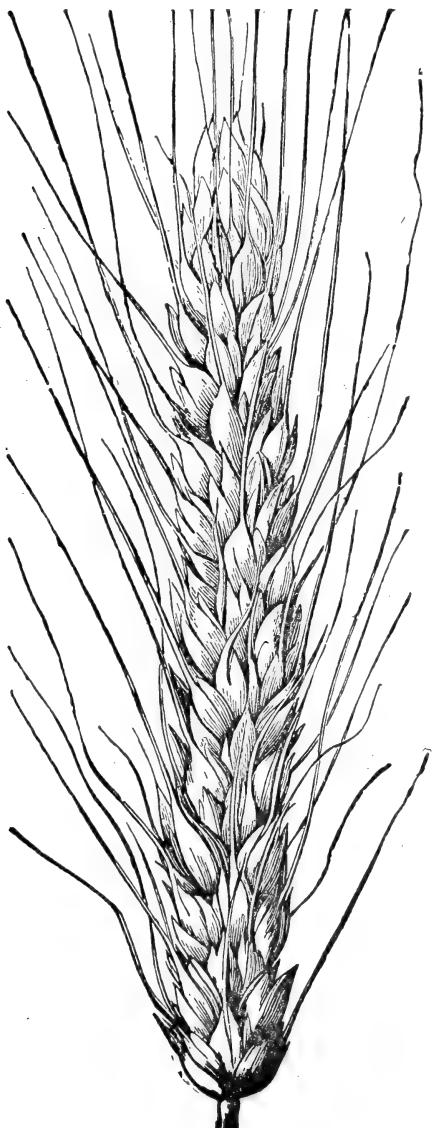
Tuesday the World contained a small item concerning the receipt in Shenandoah of a consignment of Russian seed wheat. It told also how the orders were made up. Of this same shipment the Stock Breeders Gazette, of Chicago has the following to say:

"The eighteen cars of Russian seed wheat, of which so much has been said and written, were received last week in Kansas City. The shipment contains 14,450 bushels and, including purchase price, freight, duty and expenses will cost the purchasing syndicate \$2.53 per bushel. It shows a very compact, translucent grain, weighs 60 to 65 pounds per measured bushel and was purchased by the syndicate's agent from a reliable grain dealer near the Black Sea. It appears that the dealer from whom it was bought was recommended by the Imperial authority at St. Petersburg as the one most likely to supply the true article desired. The wheat, now called the Turkish Red hard, comes most nearly resembling the newly Imported grain but the former is neither so translucent nor yet so hard. There are thirty members in the purchasing syndicate and no others will get seed from the lately arrived shipment."

One of the thirty purchasers named is J. R. Ratekin & Son, of Shenan-

doah. Their portion of this seed will be grown here in the Nishna Valley for their own special seed purposes and trade next season, and will be put into the ground next week, the condition of which has been placed in the most perfect order by the recent rains and by thoroughly worked and pulverized seed bed.

This is the first direct importation of Russian wheat ever before received in Page county, or so far as we know, into the state of Iowa, especially in any considerable quantities, and the Ratekins are to be commended and congratulated on their enterprise, as well as on their up-to-date business foresight. By this spirit of progress and knowing how to treat their customers well they have built up an enormous seed trade all over the United States.—World, Shenandoah, Iowa, Sept. 13.



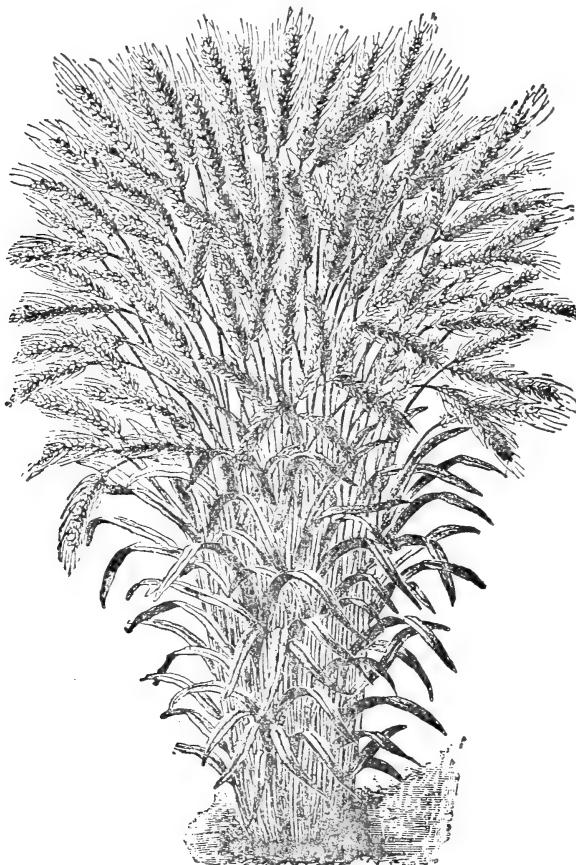
Turkish Red Winter Wheat

This is the most profitable variety of winter wheat that has ever been introduced or grown, either north or south. Our customers often in writing us, say: "The seed wheat we obtained from you is all up and looks fine, but resembles rye and is quite unlike our other wheat in its appearance." It is just as hardy as rye and withstands all the unfavorable conditions that winter rye will, either north or south. It is strictly iron clad and almost entirely free from rust, blight and scab, and lives through the winter in the most exposed places. It is not only unsurpassed but unequalled in hardiness, having produced excellent crops as far north as Minnesota. The straw is stiff enough to hold up its heavy heads, and it will stand up where other sorts lodge. Remember that this is no untried variety of winter wheat; but has been successfully grown here in Iowa for twenty years. So great has been the demand for this seed that we venture there has been thousands of bushels of seed wheat sold for Turkish Red that was not even akin to this variety. Write us for prices after July 1st—next.

CHESTERFIELD, Ill., Sept. 21, 1901.
J. R. R. & Son:—Enclosed find check for five bushels of your Turkish Red seed wheat. Ship as soon as possible. The seed corn I got from you last spring was quite satisfactory, doing better under the unfavorable conditions than other sorts I planted.

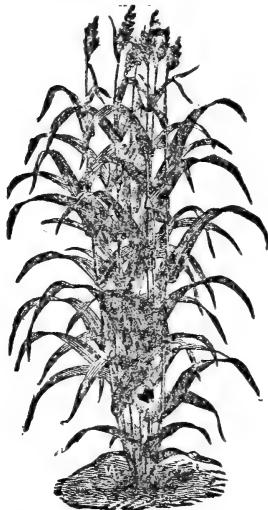
Very Respectfully,
J. M. PHELPS.

Velvet Chaff Spring Wheat This is now the standard in Iowa variety for growing having displaced all the older sorts. It has proved much superior to the Scotch Fife, Saskatchewan and other sorts, being fully equal in quality, earlier, more sure, and yielding much larger crops. It is a remarkable semi-hard spring wheat yielding large crops free from rust. It is now the main crop in the northwestern states and the great milling kings use it for their highest grade flour, and it has been the most reliable variety year after year, yielding a good crop where other kinds fail. All stocks of this variety show some mixture, but our seed is nice this year and we are sure will please our customers. Per lb. 20c; 3 lbs. 50c. By freight, peck 35c; bu. \$1.25; 2 bushels or more at \$1.15; 10 bushels or more at \$1.00.



Blue Stem Wheat

The Velvet Chaff or Minnesota Blue Stem spring wheat does the best throughout the spring wheat growing country. It is a remarkable semi-hard spring wheat, yielding large crops and is free from rust. Our millers pay more for it than any other sort. It is fully equal to the old Fife wheat and yields a very much larger crop. Our seed this year is very fine and we are sure it will please our customers. It is recleaned and graded and you will find it absolutely free and clean, clear of all oats and other noxious seed. Price per pound 20c; 3 lbs. 50c. By freight, bags free aboard the cars here, per bushel \$1.25; 5 bushels or more \$1.20; 10 bushels or more \$1.15.



Early Amber Cane

Amber Cane in recent years has attracted great attention as food for live stock, and is now recognized for its great value and adaptability as such. Its great merit as a food has become known and is here to stay, being very generally known and appreciated. The demand is increasing more and more every year and each year ten fold more than the last. It is profitably grown everywhere, from Manitoba to Mexico, on any good corn land and is not affected by drouth as other crops are, but produces wonderful forage crops, rain or shine. As a fodder plant it is the most productive and economical plant in existence, and of the very best quality. Being sweet, tender and nutritious, it is greedily eaten by cattle, horses and hogs. Dairymen find that cows give more and richer milk from its use than any other food, and it is claimed by some that as high as twenty-five, thirty and even fifty tons of the green fodder have been grown from one acre. It can be cut several times during the season if not allowed to

grow too large or high, and make good, sweet hay. Sow 100 lbs. per acre for best results. Price per lb. postpaid by mail 20c; 3 lbs. 50c. Write for prices on large quantities. 2 bu. bags 15c extra.

Kaffer Corn

Kaffer Corn is an excellent plant for fodder, yielding two crops during a season. It grows from four to six feet high, making a straight, upright growth. It has a stalky stem with numerous wide leaves and heavy foliage. The stalks keep green and brittle, not hardening like other varieties of the sorghum plant, making an excellent fodder, either green or dried which is highly relished by cattle, horses and mules. The seed crop is also very heavy, sometimes yielding from 50 to 60 bushels to the acre. For fodder, sow 25 to 50 lbs. either broadcast or in drills. Per 1 lb. 20c; 3 lbs 50c. Write for prices on large quantities. 2 bu. bags 15c extra.

Clover and Grass Seeds

Prices subject to fluctuations. If wanted by mail, add for postage 8c per pound extra. Market prices on application.

We pay particular attention to this department of our business. These seeds are selected with special reference to their quality. Purchasers may rely upon our best endeavors to furnish Grass and Field Seeds pure and free from noxious and foreign seeds—has not laid in bins until it become heated or musty—and all recleaned with best machinery to make them choice.

On account of the fluctuations on these seeds from day to day, it is impossible for us to establish a fixed price, but purchasers may depend on buying them as low as best quality can be sold for at date order is sent us, and that we will always send as much seed as money received will pay for. Market prices of the day or special prices on large quantities cheerfully given on application. Express or freight charges always paid by the purchaser, except when sufficient money is sent to pay charges. Bags 15c extra.

Clover Seed

For many years we have made this a specialty, and now have our electrical machinery for cleaning so perfected that we claim that our grades average better than those of most other markets, and believe that they cannot fail to please the most particular. Other seed dealers who have happened to be in our warehouse when we were cleaning clover, have often remarked that the seed looked so extra nice they should not reclean it. From these same lots of

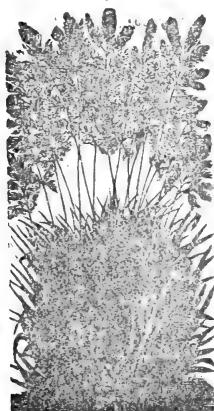
seed we were cleaning out three to five pounds per bushel of trash, sand and shrunken clover seed. This makes quite a difference in real value, and our seed is really worth ten cents to \$1.00 per bushel more than that obtained from most dealers. Crop is short this year.

Prices on clover and grass seeds are changing almost daily, so that we are unable to quote prices which will be invariable. **Don't fail to write for prices before buying.** We issue a price list each week from January to June. If you are in a hurry for seed you can order it and we will send seed to full value of money sent on day order is received. The following are the prices we are selling at on the date this catalogue goes to press, January 10, 1902. We prepay postage at the one and three pound rate; larger quantities shipped at purchaser's expense. Trial packets of any variety at 5 cents each.

Mdium Red Clover This is the most important of all clovers and the standard everywhere for hay and pasture. It is known as Common Red or June Clover in many sections. Our Iowa grown seed has become widely known for its purity, strong vitality, hardiness, vigorous and healthy growth and stooling qualities so that now we receive many orders annually from the most distant parts of the United States and also from foreign countries. It has been tested by the agricultural experiment station in various parts of the country and ranks among the highest everywhere. We claim that it will produce as much if not more hay per acre and that of better quality than seed from any other section and well posted farmers are beginning to appreciate the difference between it and ordinary stock. We have many customers in New York, Pennsylvania and other parts of the east who purchase from us annually, although our seed costs them more, freight considered, than eastern grown, and our trade in this variety during the spring season runs from 1,000 to 2,000 bushels per week. Perhaps you can buy seed a trifle cheaper per bushel from some other dealer, but if you really desire to save money you will find that it does not pay to buy the inferior seed containing a mixture of weed seeds, dirt, sand, shrunken clover, etc. It pays to have the best. Sow fifteen pounds per acre. Per lb. 25c; 3 lbs. 65c, postpaid; per peck \$1.90; bushel \$7.00. Bags extra 15c each.

Alfalfa Very popular in many portions of the country. Under proper management it will yield from ten to twelve tons to the acre. All classes of stock are exceedingly fond of it. The roots are so long and grow so deep, frost cannot heave or throw them out in winter. One sowing will stand for twenty years, and instead of impoverishing the soil, enriches it. Grows on the thinnest sandy soil and thrives in greatest drouth. Sow broadcast about twenty-five pounds to the acre. Comes up very spindling and slowly and it is necessary to mow the weeds to give it light, but when once established the weeds will be smothered. Postpaid, per lb. 30c; 3 lb. 75c; per peck \$2.50; per bushel \$9.00.

Kentucky Blue Grass.



Kentucky Blue Grass is exceedingly popular everywhere, not only for lawn but for pasture as well. It is very productive, nutritious and unusually early in spring furnishing delicious food for all kinds of stock. It is not easily affected by drouth, and frost nor cold affects the crop on the ground when winter season comes; In fact stock will graze on it during the entire winter, and horses will paw through the snow to get it in winter time. It is suited to almost any climate and soil in the union, and for practical uses for pasture invaluable. Our seed is all new crop of the best grade, from the best Kentucky growers. Fancy cleaned. Sow 14 lbs. per acre for pasture or 60 to 100 lbs. for sure, quick and immediate lawns. Per lb. 30c; 3 lbs. 80c, postpaid by mail. Per bu., 14 lbs., by freight or express, at buyers expense, \$1.75.

Dwarf Essex Rape

The most popular plant in existence for feed and pasture. Another year has added wonderfully to the popularity of Dwarf Essex Rape, and though it is of comparatively recent introduction in this country, it has proven to be the **most valuable forage plant** in existence for many sections of the country. It is easily grown everywhere, can be sown early in the season to provide pasture for sheep and swine; or sow on the stubble; but it is usually sown in June, July or August with potatoes, or on well prepared land alone for summer and fall pasture. Makes a wonderfully productive pasture for **sheep, hogs or cattle** and they gain flesh so rapidly that they soon "weigh like lead." While it is the ideal food for sheep, still it is of equal value for hogs and cattle as they are very fond of it, and it is extremely cheap, having yielded twenty tons of fodder per acre. The leaves somewhat resemble cabbage when young, later on they look more like rutabaga, being large, smooth, notched and spreading. Under ordinary conditions the plant reaches a height of two to four feet. It grows well in any climate and on almost any soil but prefers rich loam. In the east it is usually sown in drills, two to three pounds per acre, and cultivated, but in western states it is almost invariably sown broadcast, four to five pounds per acre, and it grows so rapidly that all weeds are quickly smothered.

When it is sown as a secondary or catch crop after small grain has been harvested, it is well to disc the ground thoroughly immediately before sowing. May also be sown in corn at time of last cultivation and does not appear to interfere with the crop, but makes an unequalled fall pasture. Not only does it yield an immense forage crop but the United States department of agriculture claims that it adds greatly to the fertility of the soil for the following grain crop. The cost of seed is a very small item, as five pounds are sufficient for an acre and under favorable conditions three pounds will make a good crop. One Nebraska farmer says that he sowed only three pounds to the acre on a four and one-half acre field, and five weeks after sowing he turned eighty head of hogs and forty head of pigs into the field, and they pastured there constantly until October. The plant grew so rapidly that at no time could he tell where the hogs had been, twenty feet away from the gate.

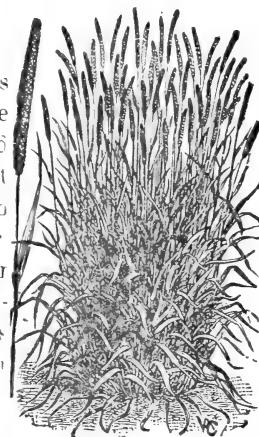
We would advise any one who has small pieces of waste ground to sow them in rape if they are in such shape that they can be used for pasturing hogs, sheep or cattle. It makes an excellent food for them, but care must be taken about feeding it to milch cows on account of it tainting the milk with a turnip taste. With rape as a forage plant and cane for fodder, farmers will add greatly to their profit. The best seed of Dwarf Essex Rape, or as some call it, "Victoria Rape," is imported from England. We have the genuine imported English seed. Beware of the cheap German Rape which can be bought at about half price; but it is worthless for forage as it goes to seed at once. Our price is very low for first class stock but you should ask for special price if you desire a large quantity.

Prices, Dwarf Essex Rape by freight or express: 5 lbs. 50.; 10 lbs. 90c; 25 lbs. \$2.00; 50 lbs. \$3.50; 100 lbs. \$7.00.



Timothy

Timothy grass, well known to every farmer, stands at the head of all other tame grasses for hay. We are located in a fine country for Blue Grasses, Clover and Timothy, and supply purchasers with the very best quality of seed. Iowa grows more Timothy seed than any state or part of the world. Timothy seed, however, is very scarce this year, and consequently much higher than for a number of years. We aim to supply our customers at lowest prices consistent with quality. Prices by mail, postpaid, per pound 10c; 3 lbs. 50c. Write for prices for large quantities. Bags 15c extra.



German Millet

German Millet, the true large headed variety and largely grown wherever its value is known. It helps out wonderfully when a short crop of hay is threatened, and produces two or three times as much per acre as timothy or clover. We are unable to make prices as the price on millet seed is fluctuating. Write us and we will cheerfully quote prices.

New Siberian Millet

This is a new and distinct variety, having bright red seed, produces a fine crop of hay about two weeks earlier than German Millet, is very leafy and of excellent quality. Sow 25 lbs. per acre. By mail per lb. 20c; 3 lbs. 50c. For bushel prices, write us.

Northern Grown Seed Potatoes

No potatoes grown can compare with those produced in the north, either for vigor and freedom from disease, or producing and long keeping qualities. Our seed potatoes have been carefully and especially grown for seed. Last season was rather unfavorable for growing potatoes, but we are pleased to say that the quality of our stock is as fine and pure as was ever grown.

Advantages of Changing Seed

There is no other crop that we raise that is so much benefited by the introduction of fresh seed from time to time as the potato. They seem to take on new life and to prosper wonderfully, provided the change is to a well selected stock, and the further north it is grown, the better. Our best customers will not plant their own raising of seed at all, but buy of us every year. They can grow nearly double the crop on the same land that they can from their own raising, and the tubers are smoother, handsomer and of better quality and more saleable on the markets.

Early Rose

Grown on Red River Valley of North Dakota. Fancy hand picked, selected stock, smooth and nice. For several years past we have been having these grown in the noted Red River Valley, about five hundred miles north, and careful tests have proven them to be fully ten days earlier than our Iowa

grown stock. This is a great advantage to the gardener and puts this variety at the head of the list of the extra earlies. They are all of good average size, strictly pure, smooth, and entirely free from scab and rot. In our tests they are positively the earliest to mature their entire crop of any variety we have ever had and outyield other sorts about two to one. This is a standard variety. Don't plant Iowa grown stock when you can obtain these, as the result our customers obtain from this seed is wonderful. One prominent market gardener who raised a great many varieties reported that our Early Rose beat them all. We bought our stock early from the most reliable grower and we can honestly say our present stock of several thousand bushels is the finest we have ever stored away for seed and are offering them at an exceptionally low price.

We could give hundreds of testimonials, highly praising our Red River potato and there is not the shadow of a doubt that they are the greatest early potato ever raised. Peck 65c; bushel \$2.00; 5 bushel or more \$1.90. Bags free.



Early Ohio

Early Ohio Early Ohio is the most popular early potato in this country. We have more calls for it than any other variety. Every potato grower knows what it is, and knows just about what it will do in his locality. It is the standard extra early the country over, and other varieties are measured by it. We will venture to say that not one farmer in ten, the country over who thinks he has Early Ohio has pure stock. Most of them do not know that they are mixed. But Early Ohio is an old variety and has become frightfully mixed throughout the United States. Farmers and market gardeners better sell off their own Ohio's and get some of our improved grown from Red River Valley seed. We consider our stock of Ohios to be the earliest, purest, and altogether the handsomest stock of Early Ohio potatoes to be found anywhere. On these points we challenge comparison with stock from any other source. We do not admit that its equal exists among Early Ohio potatoes. They are grown under conditions that make them cost more than common stock. They are selected with the utmost care and the result is grand, such as to delight every one who knows and appreciates a good potato. Every one of them is a "picture" of what an Early Ohio potato should be. 1 lb. 15c; peck 65c; bushel \$2.00; 5 bushel or more \$1.90.

General Descriptive List

Of Tested Vegetable Seeds For 1902

Embracing all the leading and most popular varieties, with brief directions for their culture, which will be found under their respective headings.

We have endeavored with the utmost caution to have our prices correct and as low (quality considered) as good fresh seeds can be sold for. We do not nor cannot compete with cheap or inferior seeds; "cheap seeds" are dear at any price even as a gift. If you are acquainted with the cost of production and the market value of high grade seeds, an examination of the figures in this book will show that **seed of equal quality cannot be had anywhere at lower prices.**

Our seeds are all new and all grown the past season. In our extensive business (the largest of its kind in the world) it is our constant aim to please and satisfy every customer, and no one can do it with cheap seeds. We consider quality of all seeds before price and that is what you are interested in when you want to plant seed of any kind. Our business for the past eighteen years has a name for fresh seed and true to name, such as not many like seed houses will bear, and during these years we have observed many freaks as well as fakes and fakers, who have appeared from time to time, who were never before heard of and never afterwards known except for the injury they have added to the misfortunes of those who patronized them. These are all important things to consider in buying seeds. We handle only one grade—the best to be had, and in our many years in the seed business we have yet to find the first dissatisfied customer. Trusting that you will favor us for whatever you may want or need for the coming season and assuring you of our constant endeavor to please you, we are, Yours very truly, **J. R. Ratekin & Son**

Beans

Culture—No crop responds more readily to good soil and cultivation than this. The soil best adapted to it is a light, rich, well drained loam, which has been manured for the previous crop. If too rank manure is used it is apt to make the plant run too much to vine. Beans are extremely sensitive to both cold and wet, and it is useless to plant them before the ground has become dry and warm. The largest returns will result from planting in drills from two to three feet apart, and leaving the plants two to six inches apart in the row. Up to the time of blossoming they should have frequent shallow cultivation, but any cutting of the roots after the plants come into bloom is likely to cause the blossoms to blast and cut off the crop. Remember that the cultivation of beans should always be very shallow, and that it is useless to expect a crop from a field so poorly prepared as to need deep stirring after planting.

Varieties should be selected so as to give a succession both of string and green shelled beans. The wax podded varieties will degenerate into a mixture of green and wax podded plants unless there is constant attention given to the removing of any green podded plants which may appear in the seed crop, and constant selection of plants of the highest type for stock seed. Hence it is especially important to use seed from reliable sources only.

Black Wax Popular with market gardeners. Pkt. 5c; pt. 25c; qt. 45c.

Burpee's Bush Lima The bushes grow eighteen to twenty inches, of stout growth and always erect, yet branching so vigorously that each plant develops into a magnificent circular bush from two to three feet in diameter. Enormously productive, single plants under favorable circumstances yielding from 200 to 350 pods. Handsome large pods well filled with very large beans, identical in size and luscious flavor with the well known large pole Limas. Pkt. 5c; pt. 25c; qt. 45c.



Davis White Wax A distinct new dwarf wax bean, popular in the family garden. It is the best white seeded wax bean, of handsome appearance and very productive. It is so productive that the vines are absolutely a mass of pods; it holds its pods well up from the ground; the pods are always full of large, plump beans; being pure white, with no eye, it is just what the bean canners have been looking for. Pint 25c; quart 45c.

Pole or Running Beans

Lazy Wife's No good wife would like to be called "a lazy wife," yet she will be excused for exhibiting a lazy spell when bean picking time comes, if she has the foresight to plant this variety. They are called Lazy Wives because they hang so full and the pods are so long and broad that a mess is soon picked. The pods are green, wonderfully broad, thick, fleshy and entirely stringless, retaining all their good qualities until nearly ripe. The peculiar taste and agreeable flavor of this bean are so captivating that other varieties are not desired while the Lazy Wives can be obtained. Pint 25c; quart 45c.

Improved Golden Wax

In spite of all the new sorts of beans being introduced every year, our trade calls for more Golden Wax than any other variety. This great popularity is due largely to the fact that the variety we have is a great improvement on the old Golden Wax, having larger pods and being much more prolific. This improved stock is one of the handsomest beans we have ever seen, the pods being of dark, rich golden yellow color and of perfect shape. For family or market you can make no mistake in planting them. Pkt. 5c; pint 25c; quart 45c.

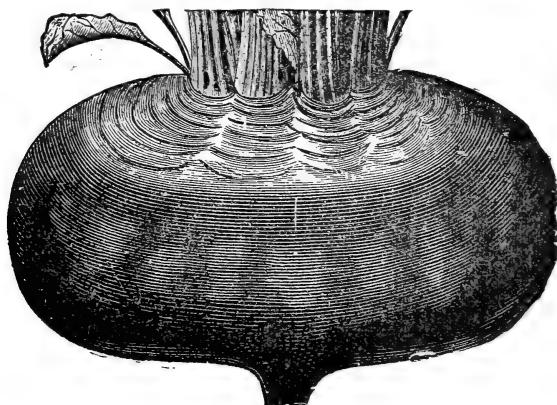
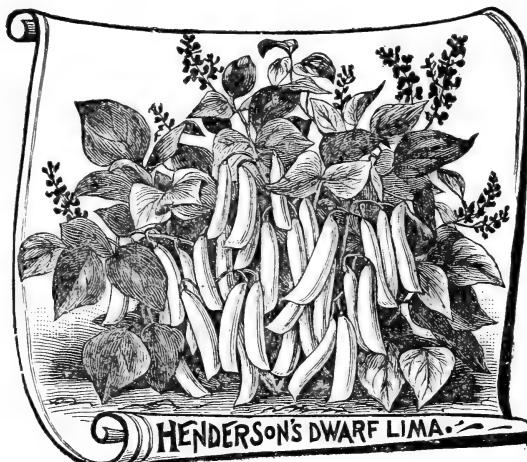
Kidney Wax

Week earlier and yield one-third more than Golden Wax, stalk erect, pods long, broad, flat, brittle, stringless, delicate waxy color, seed white with a reddish purple spot. Pint 25c; quart 45c.

Beans

Henderson's Bush Lima

Grows in compact bush form, producing enormous crops of delicious Lima beans which can be as easily gathered as the common garden bush bean; is at least two weeks earlier than any of the climbing Limas, produces a continuous crop from the middle of July until frost. Enormously productive. A very small patch will supply a family with this splendid vegetable throughout the season. Pkt. 5c; pt. 25c; qt. 50c.



CROSBY'S IMPROVED EGYPTIAN BEET. time to attain a marketable shape and size. as the ordinary Egyptian nor as round as the early Eclipse; of good size, fine quality, dark blood red color, with very small tap root and few small tops. Of very rapid growth, and may be sown outside as late as July. Pkt. 5c; oz. 10c; $\frac{1}{4}$ lb. 25c; lb. 60c.

Mangel Long Red A large, long variety, grown for stock feeding. It stands up well above the surface; color light red, flesh white and rose colored. Pkt. 5c; oz. 10c; $\frac{1}{4}$ lb. 25c; lb. 75c.

Long Smooth Blood Red Pkt. 5c; oz. 10c; $\frac{1}{4}$ lb. 25c.

Early Blood Turnip The old standby. Pkt. 5c; oz. 10c; $\frac{1}{4}$ lb. 25c.

Cabbage

Culture.—The requisites of complete success are: First, good seed; this plant is largely dependent upon the best seed for its success; no satisfactory results can possibly be obtained from poor stock. Second, rich, well prepared ground. Third, frequent and thorough cultivation. A heavy, moist, and rich loam is most suitable. It should be highly manured and worked deep,

Crosby's Improved Egyptian Beet

A superior strain of the well-known Early Egyptian. The result of years of careful selection by a noted eastern market gardener. Retains the earliness of the parent stock and is the best beet for forcing or for first sowing outside. Desirable for small beets for forcing or for early market, as it assumes its turnip shape in the early stages of growth, and on this account is preferable to other varieties requiring a longer

time to attain a marketable shape and size. Of handsome form, no' so flat as the ordinary Egyptian nor as round as the early Eclipse; of good size, fine quality, dark blood red color, with very small tap root and few small tops. Of very rapid growth, and may be sown outside as late as July. Pkt. 5c; oz. 10c; $\frac{1}{4}$ lb. 25c; lb. 60c.

Cabbage is universally grown all over the country, and specific directions regarding the time and methods of planting applicable to all localities cannot be given. In general, north of the 40th parallel, the early sorts should be sown very early in hot beds, hardened off by gradually exposing them to night air, and transplanted as early as the ground is in good condition, setting eighteen to thirty-six inches apart, according to size of variety. South of the 40th parallel sow about the middle of September, or later according to latitude, transplanting into cold frames if necessary to keep through winter, and setting in open ground as early as possible in the spring.

The late autumn and winter varieties may be sown from the middle to the last of spring, and transplanted when four to six inches high. Shade and water the late sowings in dry weather to get them up. It is important that the plants should not be crowded in the seed bed, or they will run up weak and slender and be likely to make long stems.

One of the most successful eastern market gardeners recommends sowing cabbage for family use as follows: At the desired time sow the seed in hills six to twelve seeds in a place, and after the plants are of sufficient size thin to a single plant to the hill, and cultivate as usual. This is a very simple method and in some cases is very successful.

Cabbages should be hoed every week, and the ground stirred as they advance in growth, drawing up a little earth to the plants each time until they begin to head, when they should be thoroughly cultivated and left to mature. Loosening the roots will sometimes retard the bursting of full grown heads.

Of late years many crops of early cabbages have been destroyed by maggots at the roots. The best remedy seems to be to remove the earth from around the stem and apply an emulsion of kerosene (coal oil) made as follows: Add one quart of kerosene oil to two quarts of boiling soft soap which has been thinned to the consistency of cream. Stir the oil thoroughly by churning or other method until it has united with the soap and forms a cream-like substance. Then dilute with five times as much water.

Tobacco dust, ashes, slacked lime and coal dust are all recommended as preventives, and with us have proved valuable in the order named. These are scattered about the plants, leaving one here and there untreated for the flies to congregate around and deposit their eggs upon, when the plants should be pulled up and destroyed.

The cabbage worms which destroy the leaves and heads later, may be killed by dusting with pyrethrum powder, slug shot or paris green. The last two are poisonous and should not be used in large quantities or late in the season.

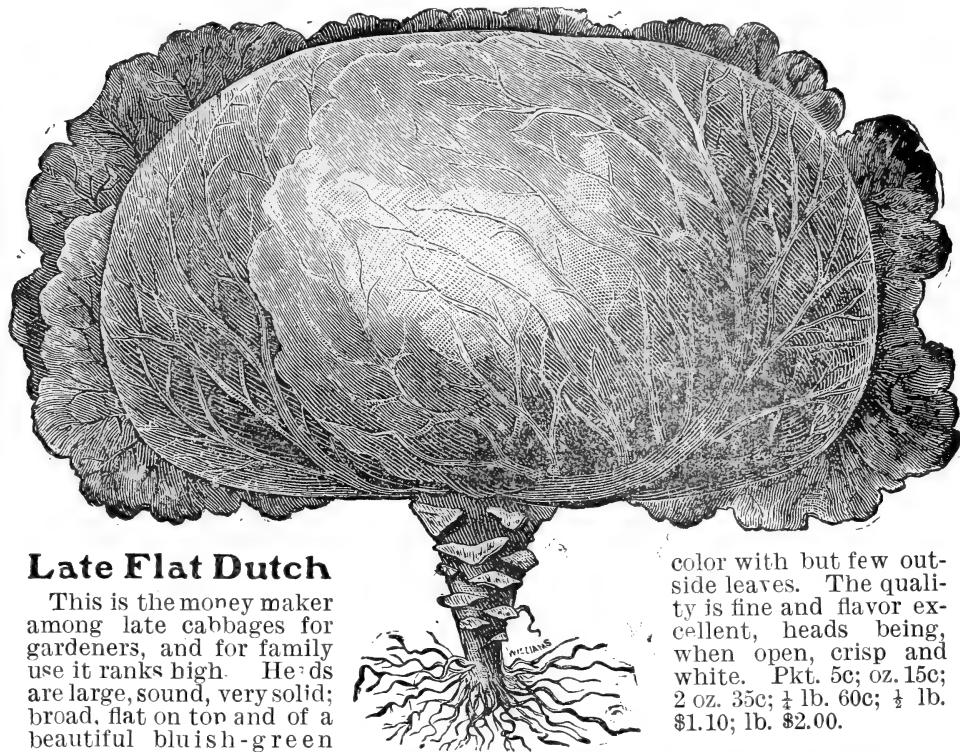
If the disease called club root should get a foot-hold, do not plant the land with any of the cabbage family for a year or two. This is usually an effective remedy.

To preserve cabbages during winter, pull them on a dry day, and turn them over on the heads a few hours to drain. Set them out in a cool cellar, or bury them in long trenches in a dry situation, covering with boards or straw so as to keep out frost and rain.

A great many of the varieties of cabbages are simply strains rather than distinct sorts and are really the same as some older and better known kinds. We do not know of a single variety offered in this country which we have not seen both in trial and in fields, and we are confident that every good quality can be found in a greater degree in the varieties we offer than in any other kinds.

Early York Heads small, heart shaped, firm and tender; of very erect, and dwarf habit, so that they may be grown fifteen or eighteen inches apart. Pkt. 5c; oz. 15c; 2 oz. 25c; $\frac{1}{4}$ lb. 40c; lb. \$1.50.

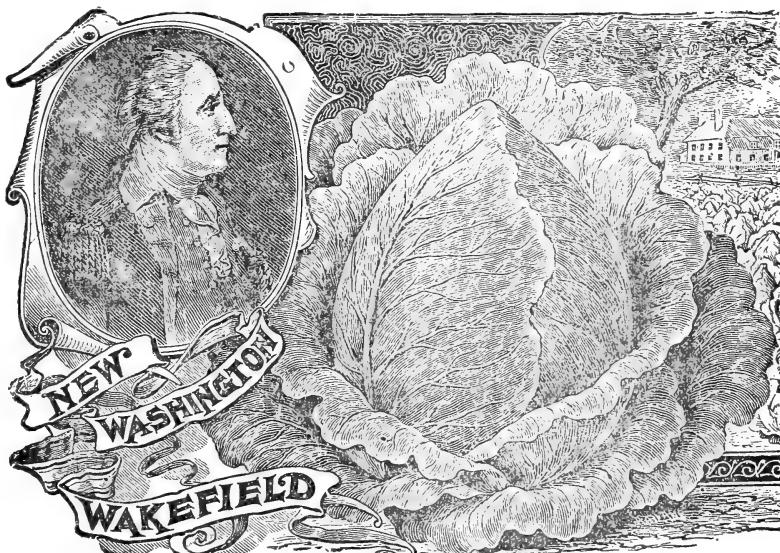
Surehead A famous main crop cabbage, producing large, round flattened heads of the "Flat Dutch" type, and is remarkable for its certainty to head. Heads uniform, hard, firm and fine in texture, weighing from 10 to 15 pounds; sweet flavored, has scarcely any loose leaves, keeps well. Good for shipping and just the quality to suit market gardeners and farmers. Pkt. 5c; oz. 15c; $\frac{1}{4}$ lb. 50c; $\frac{1}{2}$ lb. 80c; lb. \$1.50.



Late Flat Dutch

This is the money maker among late cabbages for gardeners, and for family use it ranks high. Heads are large, sound, very solid; broad, flat on top and of a beautiful bluish-green

color with but few outside leaves. The quality is fine and flavor excellent, heads being, when open, crisp and white. Pkt. 5c; oz. 15c; 2 oz. 35c; $\frac{1}{2}$ lb. 60c; $\frac{1}{2}$ lb. \$1.10; lb. \$2.00.



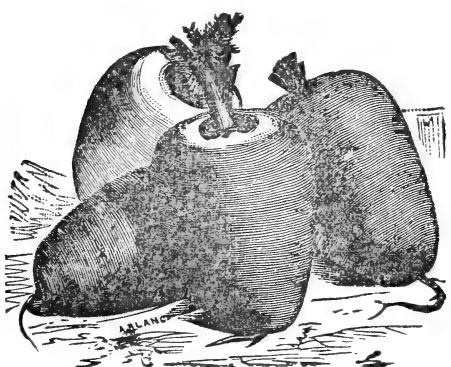
Early Jersey Wakefields

The earliest and hardest heading of extra early cabbages. Our seed is new and good. Heads conical, very compact, solid and of excellent quality. The thick, stout leaves and compact habit make it the best for wintering over and very early setting. Pkt. 5c; oz. 35c; 2 oz. 60c; $\frac{1}{2}$ lb. \$1; lb. \$3.50.

Carrots

The carrot is one of the most wholesome and nutritious of our garden roots and deserves to be more extensively used, both for culinary and stock feeding purposes. We urge our readers to give some of the early table sorts a trial. For feeding stock, especially horses and milch cows, the carrot cannot be surpassed; and it should be more largely grown by farmers for this purpose.

Culture—While the sandy loam made rich by manuring the previous year is the best soil for the carrot, any good land if thoroughly and deeply worked, will produce satisfactory crops. When it is possible to do so, it is advisable to sow as early in the spring as the ground is fit to work, though good crops may, in this latitude, be grown from sowings as late as June 15, but success from such late planting is uncertain. For table use sow the smaller kinds as early as practicable in rows 16 to 18 inches apart. For field culture prepare the ground thoroughly and sow in drills 18 to 24 inches apart, using from one and one-half to three pounds to the acre, according to the distance between rows. Cover one-half to one inch deep and see to it that the soil is pressed firmly above the seed. As soon as the plants appear, use the cultivator or wheel hoe. Do not let the weeds get a start. Thin the smaller table sorts to 8 to 10 to a foot, and the field varieties to 3 to 6 inches apart in the row. For winter use gather and store like beets or turnips.



Orange or Ox Heart

Tops small for the size of the roots which are comparatively short, but often reach a diameter of seven inches, terminating abruptly in a small tap root. Flesh bright orange, fine grained and sweet. This is a desirable variety for soil so hard and stiff that longer growing varieties would not thrive in it. When young, excellent for table use, and when mature, equally good for stock. Pkt. 5c; oz. 10c; 2 oz. 15c; $\frac{1}{2}$ lb. 25c; lb. 80c.

Danvers Grown largely on account of its great productiveness and adaptability to all classes of soil. Tops medium sized, coarsely divided. The smooth and handsome roots are of deep orange, of medium length, tapering uniformly to a blunt point, flesh sweet, crisp, tender and of a deep orange color. Although the roots of this variety are short, they produce as large a bulk as the longer field sorts and are more easily harvested. Pkt. 5c; oz. 10c; 2 oz. 15c; $\frac{1}{2}$ lb. 25c; lb. 80c.

Cauliflower

Early Snowball Admirably adapted for forcing or wintering over for early crop and the most popular sort for these purposes. It is also one of the best sorts for late summer and fall crop and with reasonably favorable conditions every plant will form a large solid head of fine quality. The plants are compact with few narrow, upright leaves and are well suited for close planting. The heads are solid, compact, round, very white and curd like and are developed earlier than those of any other sort. We know our stock of this variety is unsurpassed and is superior to much that is sold under such names as "Gilt Edge," "Earliest," etc. Pkt. 25c

Celery

Culture—Sow the seed, (which is slow to germinate,) in shallow boxes or in a finely prepared seed bed out of doors, in straight rows, so that the small plants may be kept free from weeds. See to it that the seed is not covered too deep and that the bed is kept moist, almost wet, until the seeds germinate, as plenty of moisture is essential to get a satisfactory growth; when about two inches high, thin out and transplant so that they may stand three inches apart, and when the plants are four inches high, cut off the tops which will cause them to grow stocky. The crop is usually made to succeed some earlier one, but in order to grow good celery the soil must be made rich as possible, the essentials to success being very rich soil and plenty of water. If good plants are used they may be set out as late as the middle of August, but the best results are usually obtained from setting about the middle of June or the first of July. The most desirable time will depend upon local climate, and is that which will bring the plants to maturity during cool, moist weather. In setting, prepare broad, shallow trenches about six inches deep and four to six feet apart in which the plants should be set six inches apart, cutting off the outer leaves and pressing the soil firmly about the roots. When the plants are nearly full grown they should be "handled" which is done by one man gathering the leaves together, while a second draws the earth about the plant to one-third its height, taking care that none of the earth falls between the leaves, as it would be likely to cause them to rust or rot. After a few days draw more earth about them, and repeat the process every few days until only the tops of the leaves are visable. Or it may be blanched by pressing the leaves together with two wide boards held in place by stakes, or by wire hooks at the tops. This is the method commonly used by market gardeners, but celery so blanched is more likely to become pithy than that blanched with earth. Care should be taken that the plants are not disturbed while they are wet or the ground is damp, as it would be likely to injure them. A part of the crop may be simply "handled" and then at the approach of severe freezing weather taken up and set out compactly in a dark cellar or unused cold frame which can be kept just above the freezing point, and it will gradually blanch so that it may be used throughout the winter. Should the plants begin to wilt, water the roots without wetting the stalks or leaves, and they will revive again. Celery is sometimes grown by what is termed the new process, which consists in making a spot as rich as possible, and there setting the plants six to eight inches apart each way. If the soil is very rich and there is an abundance of water, the plants will blanch each other and the product will be very white and handsome, but we think it is inferior in quality to that grown by the old method.

White Plume We are fully aware that this variety has great merit as an early market sort, being as early as any and very attractive. Plants light yellowish green with tips of leaves almost white. As they mature the inner stems and leaves turn white, and require to be earthed up but a short time before they are in condition for use. Where a fine appearing celery at a minimum amount of labor is the object, this variety will give entire satisfaction. An "improved" White Plume with long stem is being offered, but careful comparison with our stock shows that it is not equal in quality or so desirable as that we offer. Pkt. 5c; oz. 20c; 2 oz. 35c; $\frac{1}{2}$ lb. 60c; lb. \$2.00.

Corn, Sweet or Sugar

Culture—A rich, warm, alluvial soil is best, but excellent sweet corn can be raised on any good, ordinary soil if it is deeply and thoroughly worked before planting. Give frequent and thorough but shallow cultivation until the tassels appear.

Mammoth White Cory The largest and best extra early Sweet Corn. The stalks are no larger than those of the White Cob Cory, but each stalk furnishes two or more large, fine shaped ears which are fit for use before those of any other sort. The ears are twelve-rowed, very symmetrical and handsome, with no opening between the rows at the base. The grain is large, broad, very white and of remarkably good quality for such an early sort. The beauty and quality of this variety give it ready sale even when the market is overstocked. Pkt. 10c; pt. 15c; qt. 20c; 4 qts. 60c; bu. \$3.50.

White Cob Cory The plants are usually about four feet high and bear two or even three ears which are eight rowed with large, somewhat coarse but very sweet and tender grain. Pkt. 10c; pt. 15c; qt. 20c; 4 qts. 60c; bu. \$3.00.

Stowell's Evergreen The standard main crop variety, and if planted at the same time with earlier kinds, will keep the table supplied until October. It is hardy and productive, very tender and sugary, remaining a long time in condition suitable for boiling. Our stock has been carefully grown and selected to avoid the tendency to a shorter grain and deterioration in the evergreen character of this best known of all late sorts. Pkt. 10c; pt. 15c; qt. 20c.

Rice Pop Corn A very handsome and prolific variety. Ears short; kernels long, pointed and resemble rice; color white. Probably no variety of pop corn is superior to this for parching. We supply lots of four quarts and less shelled. Pkt. 10c; pt. 10c; qt. 15c; 4 qts. 30c.

If corn is wanted by mail add 10 cts. per pint, 15 cts. per quart for postage.

Cucumber

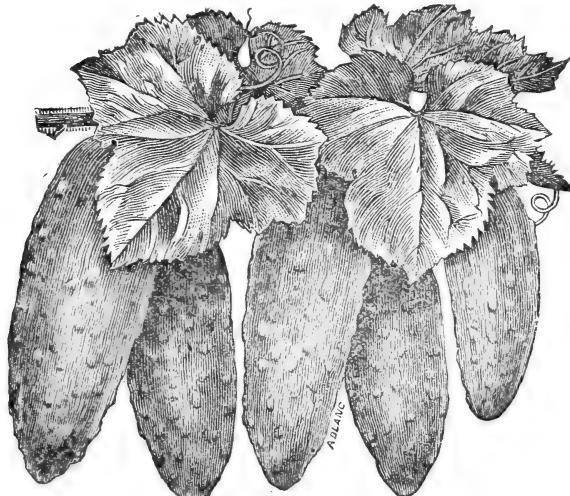
This is one of the vegetables that can be grown to perfection by any one who can control a few square yards of soil that is exposed to the sun. The fruit is so much better when gathered fresh from the vines than it is when obtained in the market, that every family should be supplied from its own garden.

Culture.—In order to obtain the largest yield of cucumbers the soil should be well enriched with well rotted manure, but an abundance of good fruit can be raised on any rich garden soil. Plant the seed in hills four to six feet apart each way, dropping fifteen to twenty seeds in a hill. After the plants begin to crowd and the striped beetles are pretty well gone, thin to three plants to the hill. Give frequent but shallow cultivation, until the plants make runners so long that this is impracticable. In field culture, plow furrows four feet apart and similar ones at right angles to the first. At each intersection drop a shovelful or more of well rotted manure which should be well mixed with soil, forming a broad, flat hill, four to six inches above the surface. Many growers omit every fourth row, thus forming paths for the distribution of manure and gathering the fruit. In many sections where earliness is very important, market gardeners start plants in boxes made like the ordinary berry box, but without the raised bottom. The boxes are set in hot beds or cold frames filled with rich, friable soil, and the seed planted. When danger of frost is over the plants are set in the open ground, the boxes being cut away, so the roots are not disturbed at all.

The plants are liable to attack from the striped cucumber beetles, which are so numerous in some cases as to destroy them. These may be kept off by frequent dusting with air slacked lime, soot or sifted ashes diluted with fine road earth: care should be taken not to use too much of any of the above materials, for if used too freely they will kill the vines; the best protection against injury is a vigorous and rapid growth of the young plants.

Pick all the fruit before it begins to ripen, as the vines will cease setting fruit as soon as any seed begins to mature. In gathering for pickles, cut the stem instead of pulling the fruit off, and be careful not to mar the fruit in any way, for if the skin be broken, the pickles will not keep so well.

Early Cluster Vines vigorous, producing the bulk of the crop near the root and in clusters, fruit short, uniformly thick end, dark green, but paler at blossom end. A very productive sort. Pkt. 5c; oz. 10c; $\frac{1}{4}$ lb. 20c; 1 lb. 50c.



CHICAGO PICKLE CUCUMBER.

Chicago Pickle Very popular with Chicago market gardeners, and extensively grown in that vicinity. Fruit medium length, pointed at each end, with very large and prominent spines, color deep green. Pkt. 5c; oz. 10c; $\frac{1}{4}$ lb. 20c; 1 lb. 55c.

Early Frame An old and popular variety, of medium size, straight and handsome, excellent for pickles when young. Pkt. 5c; oz. 10c; $\frac{1}{4}$ lb. 20.

Lettuce

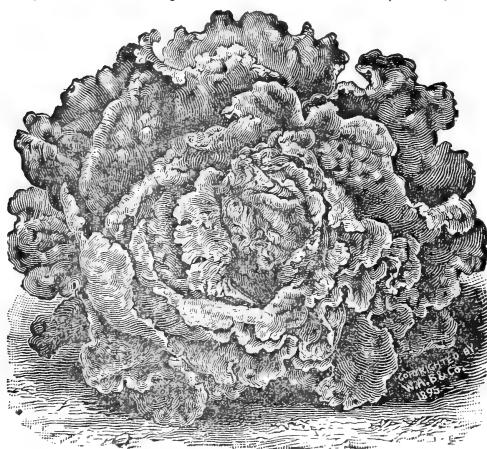
Culture—Lettuce ought to be grown rapidly, and therefore it should be sown in a rich, thoroughly prepared soil. For early crop sow under glass from November to February, and thin out as necessary, to prevent crowding. Keep at a moderate heat and give all the air and light possible. For early, outdoor culture, start plants in the fall, protecting them as needed with frames of coarse cotton, or start under glass from January till March and harden off before setting in the open ground. This should be done as soon as the weather and ground will permit. For general crop sow out doors as early in spring as the ground can be worked in drills eighteen inches apart and thin the young plants to four inches apart in the row. As the plants begin to crowd, thin them out and use as required. In this way a much longer succession of cuttings may be had from the same ground. Sow at intervals of from two to three weeks throughout the summer for a continuous crop. In this as in every other garden crop thorough cultivation is essential. We make a careful trial of the various varieties of lettuce, both old and new, each season, and feel sure that our list embraces all the kinds that are necessary to give a constant supply of the best quantity.

Improved Hanson Plant large, forming a large, flat head, resembling that of cabbage, and so slow to form a head stalk that it often fails to go to seed. Outer leaves bright green with prominent light colored veins, inner leaves white and usually curved and twisted at the base; very tender and sweet. A standard summer head lettuce. Pkt. 5c; oz. 15c; 2 oz. 25c; $\frac{1}{4}$ lb. 40c; 1 lb. \$1.25.

Improved Long Green

Produced by selection from the Long Green. Vines vigorous and productive, forming fruit fit for the table nearly as early as the shorter sorts; fruit about twelve inches long, firm and crisp. The young fruit makes excellent pickles. We offer a carefully selected strain, uniformly long and of good form, with the large warts and spines well distributed over the surface instead of being clustered at one end as in inferior stocks. Pkt. 5c; oz. 10c; $\frac{1}{4}$ lb. 20c; 1 lb. 55c.

Early Prize Head It forms a mammoth head and remains tender and crisp throughout the season; is prompt to head but slow to seed, of superior flavor and very hard. Leaves of dark reddish brown color variegated with dark green. It is an immensely popular variety. Price: Pkt. 5c; oz. 10c; $\frac{1}{4}$ lb. 40c.



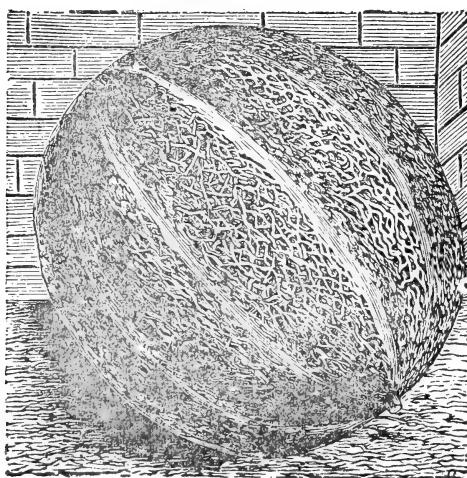
gardeners, as it is attractive, of excellent quality, and continues a long time in condition for use. Pkt. 5c; oz. 15c; 2 oz. 25c; $\frac{1}{4}$ lb. 40c; 1 lb. \$1.25.

Black Seeded Simpson

For those who like a large, thin, exceedingly tender leaf, and for those markets which demand a large loose cluster of leaves rather than a solid head, this is one of the best varieties either for forcing or early sowing out of doors. Plant forms a large, loose head; light yellowish-green in color, so that a little wilting is not noticed. Leaves large, thin, slightly ruffled and blistered. Even the large outer leaves are quite tender and the inner ones are much more so and also well blanched. One of the best and most popular varieties for market

Musk Melons

Culture.—Cultivate as recommended for cucumbers, except that the hills should be six feet apart. Rich earth for the young plants is far better than manure, but if the latter must be used, see that it is well rotted. If the plants grow very rank, more and finer fruit will be secured by pinching off the ends of the shoots when about three feet long. The quality of melons of all varieties is largely dependent upon conditions of growth and ripening. Unhealthy vines or unfavorable weather produces fruit of comparatively poor flavor.



EAST EARLY HACKENSACK MUSK MELON.

Extra Early Hackensack

We offer under this name a very distinct stock, different and much superior to that often sold as Extra Early Hackensack. The fruit is medium sized, nearly round with deep ribs and very coarse netting. The flesh is green, a little coarse but very juicy and sweet. Pkt. 5c; oz. 10c; $\frac{1}{4}$ lb. 20c; 1 lb. 65c.

Nutmeg

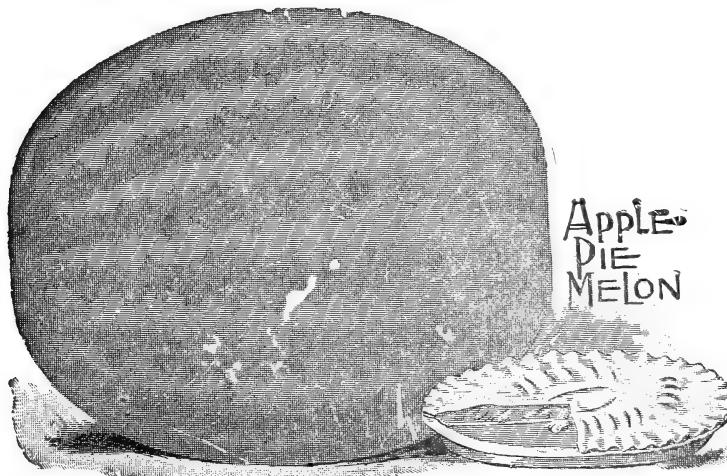
Fruit of medium size, slightly ribbed, globular. Skin dark, green becoming yellow when over ripe, and nearly covered with broad shallow netting. Flesh thick, a little coarse, but of fine flavor. This variety is in universal demand for both home and market use. It

is the size best suited to hotel and restaurant use. Our stock is carefully grown and selected, and will be found first class in every particular. Pkt. 5c; oz. 10c; 2 oz. 15c; $\frac{1}{4}$ lb. 20c; lb. 60c.

Rocky Ford This has become one of the most popular of small or basket melons, and is shipped in large quantities from Colorado and Arizona. The fruit is oval, slightly ribbed, densely covered with coarse netting. Flesh thick, green, very sweet and high flavored. We offer an exceptionally fine stock of this sort, the fruit being wonderfully uniform in shape and quality. Pkt. 5c; oz. 10c; 2 oz. 15c; $\frac{1}{4}$ lb. 25c; lb. 75c.

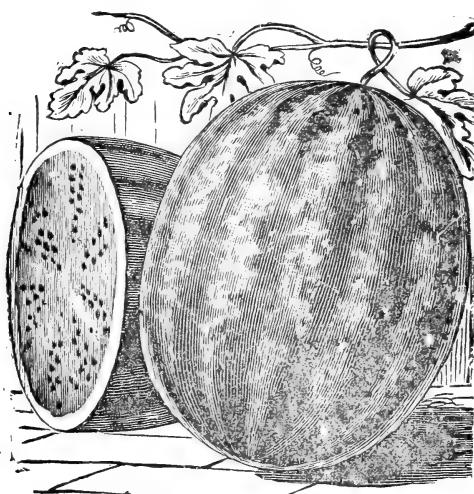
Water Melons

Culture—In water melon culture it is essential to get good strong vines early in the season. These may be secured by forming large, well drained hills of earth, about eight feet apart, made very rich with an abundance of well rotted manure, which should be thoroughly mixed with the soil, for if left in a mass it will lead to the plants burning out under the hot sun. In these hills plant the seed as soon as the ground is warm and dry and carefully protect the young plants from insects, and hasten their growth by the use of liquid manure.



Kolb's Gem Vines of medium size, but remarkably vigorous and healthy. Leaves of medium size, deeply cut with a peculiar frilled edge. Fruit of the largest size, round or slightly oval, marked with irregular mottled stripes of dark and light green. Outer rind or shell exceedingly hard and firm, making it a good sort for shipping long distances. Flesh bright red, solid, a little coarse, but sweet and tender. Pkt. 5c; oz. 10c; 2 oz. 15c; $\frac{1}{4}$ lb. 20c; lb. 50c.

Peerless or Ice Cream One of the best sorts for private gardeners and for market gardeners who deliver direct to customers. Vine moderately vigorous, hardy, productive; fruit medium sized, oval, finely mottled, rind thin, flesh bright scarlet, solid to the center, crisp, tender and of the highest flavor. Pkt. 5c; oz. 10c; 2 oz. 15c; $\frac{1}{4}$ lb. 20c; lb. 50c.



Sweet Heart Very popular as a shipping melon. Vine vigorous and productive, ripening its fruit early. Fruit large, oval, very heavy, uniformly mottled light and very light green. Rind thin but firm. Flesh bright red, firm, solid but very tender, melting and sweet. Fruit retains its good quality for a long time after ripening. Our stock is the very best. Pkt. 5c; oz. 10c; 2 oz. 15c; $\frac{1}{4}$ lb. 20c; 1lb. 60c.

Black Diamond Originated in the famous water melon district of Indiana, near the home of "Sweet Heart" and "Hoosier King" and has had five years careful selection and improvement. Pkt. 5c; oz. 10c.

Cole's Early The finest melon ever offered for the amateur and for the home market. Being somewhat brittle it will not do for shipping purposes. Very early and will mature in every state. Very hardy, vigorous, and a sure cropper. Flesh sweet and delicate in texture, of a deep red color. The rind is thin and the quality of the flesh is sustained clear to the rind. Melons medium size, nearly round in shape, rind green, striped with lighter shades. Pkt. 5c; oz. 10c; 2 oz. 15c; $\frac{1}{4}$ lb. 20c.

Onions

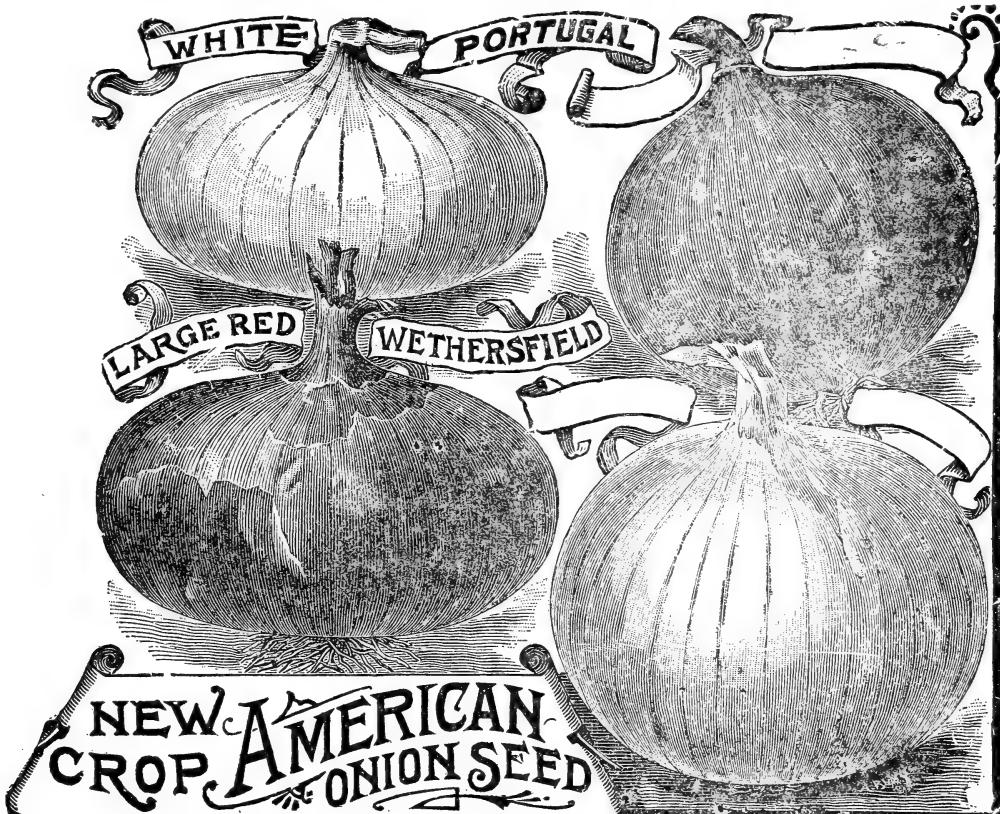
The Soil—How to raise Onions is a question we are asked many times a year, and will try to answer from our experience in raising thousands of bushels annually. A good crop of Onions can be grown on any soil which will produce a full crop of corn, unless it be a stiff clay, very light sand or gravel, or certain varieties of muck or swamp lands on which they invariably grow necky and cannot be made to ripen down well, while other muck soils give immense crops of the finest quality. We prefer a rich sandy loam, with a light mixture of clay. This is much better if it has been cultivated with hoed crops, kept clean of weeds and well manured for two years previous, because if a quantity of manure to raise an ordinary soil to a proper degree of fertility is applied at once, it is likely to make the Onions very soft.

The Seed—Onion seed, as every gardener and Onion fancier knows, is one of the seeds in the buying of which price should never be questioned. Why should you speculate on wild cat stock, or that which may be offered as good seed—cheap. Does it not take a great deal of money and an untold amount of care to produce the choicest stock seed? Is the difference of a few cents in the cost of a pound of seed anything in comparison to the hundreds of dollars at stake in your Onion crop? Most assuredly not. We have made a life-long study of Onion growing and the seed which we offer can be relied upon as being second to none—if not the best.

Sowing—This should be done as soon as the ground can be gotten ready, and can be done best by a hand seed drill. This should be carefully adjusted (tested by running it over a barn floor) to sow the desired quantity of seed, and about $\frac{1}{4}$ inch deep. The quantity needed will vary with the soil, the seed used and the kind of Onions desired. Thin seeding gives much larger Onions than thick. Four to six pounds of seed per acre is the usual quantity needed

to grow large Onions, while for growing pickling and set Onions from twenty to fifty pounds per acre is required. We use a drill with a roller attached, but if the drill has none, the ground should be well rolled with a hand roller immediately after the the seed is planted.

Cultivation—Give the Onion the first hoeing, just skimming the ground between the rows, as soon as they can be seen the length of the row. Hoe again in a few days, this time close up to the plants, after which weeding must be continued. This operation requires great care to be thoroughly done. The weeder must work on his knees astride of the rows, stirring the earth around the plants in order to destroy any weeds that have just started. In ten days or two weeks they will require another hoeing, and if necessary, another weeding. If the work has been thoroughly done at the proper time, the crop will not require further care until ready to gather.



Large Red Wethersfield This is the standard red variety, and a favorite onion in the East, where immense crops are grown for shipment. Large; skin deep purplish red; form round, somewhat flattened; flesh purplish white; moderately fine grained, and stronger flavored than any of the other kinds. Very productive, the best keeper and one of the most popular for general cultivation. It is more inclined to form large necks if planted on unsuitable soil than the Danvers, but is the best variety on poor or dry soil. Pkt. 5c; oz. 15c; 2 oz. 25c; ½ lb. 40c.

Yellow Globe Danvers The ideal Danvers onion was originally oval or nearly flat, and it has been thought by many that its small neck and splendid ripening habit could only be obtained in onions of that shape, but we have by careful selection and

breeding developed a strain having to a remarkable degree the ripening habit and small neck of the original Danvers and yet decidedly more globular in form, thus giving larger yields and handsomer bulbs without sacrificing any of the good qualities of the most popular of yellow onions. Pkt. 5c; oz. 15c; 2 oz. 25c; $\frac{1}{4}$ lb. 40c; lb. \$1.25.

White Portugal or American Silverskin A large flat onion of mild flavor and great beauty, its clear white skin glistening like silver. A favorite with many for use when young as a salad or bunching onion, and for pickles; it is also a good keeper and fine for fall and early winter use. An excellent sort for gardeners who do not care to plant more than one variety. Pkt. 5c; oz. 25c; 2 oz. 40c; $\frac{1}{4}$ lb. 75c.

PARSNIP

The value of the parsnip as a culinary vegetable is well known, but is not generally appreciated at its full value for stock feeding. On favorable soil it yields an immense crop of roots, which are more nutritious than carrots or turnips, and particularly valuable for dairy stock.

CULTURE.—They do best on a deep, rich, sandy soil, but will make good roots on any soil which is deep, mellow and moderately rich. Fresh manure is apt to make the roots coarse and ill-shaped. As the seed is sometimes slow to germinate, it should be sown early, in drills two feet to two and one-half apart; cover one-half inch deep and press the soil firmly over the seed. Give frequent cultivation, and thin the plants to five or six to the foot.

Hollow Crown Root white, very tender, with a smooth, clean skin. The variety is easily distinguished by the leaves growing from a depression on the top or crown of the root. Pkt. 5c; oz. 10c; 2 oz. 15c; $\frac{1}{4}$ lb. 20c; lb. 50c.

Pepper

The culture of pepper is the same as for egg plant; the plants need quite as much heat to perfect them, though they mature sooner and may be sown a little later. Guano, hen dung, or any other bird manure, hoed into the surface soil when the plants are about six inches high, will wonderfully increase the product and also increase the quality of the fruit.

Large Bell Our stock of this well-known variety which is sometimes called Sweet Mountain is a great improvement on the best stock obtainable only a few years ago. Plants vigorous, compact, very productive, ripening its crop uniformly and early. It is one of the most popular and desirable sorts. Fruit large, cylindrical, with thick mild flesh, of excellent quality for use in salads and pickles; color bright red when ripe. Pkt. 5c; oz. 25c; 2 oz. 40c; $\frac{1}{4}$ lb. 75c; lb. \$2.25.

Peas

Culture—For early peas the soil should be light and warm, but for general crop a moderately heavy soil is better. Fresh manure and very rich or wet mucky soil should be avoided, as they cause a rank growth of vine at the cost of the quality of the peas; such soil is often the cause of early sorts maturing unevenly. Sow as early as possible a few of the earliest varieties on warm, quick soil, prepared the fall before. The general crop can be delayed until later, but we have met with better success from sowing all the varieties comparatively early, depending for succession upon selecting sorts that follow each other in ripening. The peas will mature earlier if covered only one inch deep, and where earliness is most important they may be treated in that way; but larger pods and more of them will be produced if the seed be planted in trenches three to six inches deep, covered with only one or two inches of soil. When the plants are five or six inches high, fill the trench level with the surface; this will secure deep rooting, prevent mildew and prolong the bearing

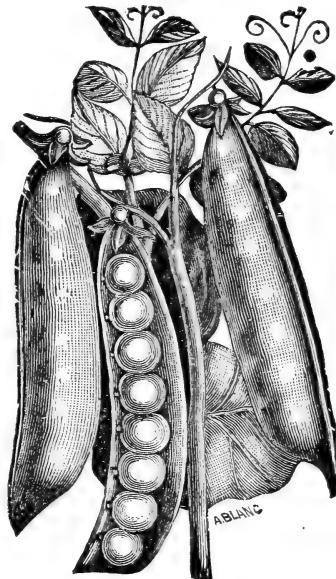
season. If the peas be covered to the full depth at first, or if water be allowed to stand in the trenches, they will not make a good stand of healthy plants.

The crop should be gathered as fast as it is fit for use. If even a few pods begin to ripen, not only will new pods cease to form, but those partly advanced will stop growing.



American Wonder

A variety nearly as early as the First and Best, with stout, branching vines about nine inches high, and covered with well filled pods containing seven or eight large, exceedingly sweet, tender and well flavored peas. Dry peas medium sized, much wrinkled; pale green. We have taken great pains in growing our stock, and know it to be pure and true. Pkt. 10c; pt. 30c; qt. 50c



MCLEAN'S LITTLE GEM PEAS

McLean's Little Gem

An early dwarf, green, wrinkled variety, growing about fifteen inches high. When green it is very large, sweet and of delicious flavor. Pkt. 10c; pt. 30c; qt. 50c.

Radish

Cultivated chiefly for its roots, though the young seed leaves may be used as salad and the green seed pods for pickles. For the home garden sow on rich, sandy soil as early in the spring as it is fit to work. For forcing sow in hot-beds, having very rich, sandy soil, made perfectly level. Scatter evenly over the surface from sixty to one hundred and fifty seeds to the square foot and cover with one-half inch of soil sifted on, and attend carefully to the watering and airing. If the bed is a good one, the whole crop can be marketed in twenty-one to forty days after planting. In open ground culture, sow in drills seven inches apart and thin, if necessary, to prevent crowding. A good dressing of nitrate of soda will greatly stimulate growth and insure tender, brittle roots. Successional sowings from one week to ten days apart will keep up a supply. After the hot weather of summer begins it is better to sow the summer and winter varieties, as they do not become tough and stringy nor pithy so quickly as the early sorts. Radishes are subject to root maggots, which makes them useless for culinary purposes. We know of no certain remedy for this pest. We have found that the best preventive measures are, to avoid the use of rank manure and not to sow on ground where radishes, tur-

nips or cabbages were grown the year previous. We have been very careful to secure the very best seed possible, and are certain that there is none sold under other names which is better than the varieties we offer.

Early Scarlet Turnip One of the handsomest of the turnip radishes and a great favorite in many large markets, for early planting outdoors. It is but little later than the White Tipped, Forcing, and will give entire satisfaction where extreme earliness is not the primary object. Roots slightly flattened on the under side, color very deep scarlet with a white tip; flesh white and of the best quality. Pkt. 5c; oz. 10c.

Improved French Breakfast The favorite in Paris markets. A medium-sized radish, olive shape, small top, of quick growth, very crisp and tender, of a beautiful scarlet color, except near the tip, which is pure white. A splendid variety for the table on account of its excellent quality and its beautiful color. Pkt. 3c; oz. 6c; 2 oz. 10c; $\frac{1}{2}$ lb. 16c; $\frac{1}{2}$ lb. 28c; lb. 50c.

Improved Chartiers One of the best for sowing outdoors. Roots are very early, hard and crisp until they reach a diameter of two inches, and three times as long as any of the above. Flesh white, crisp and mild flavored. Pkt. 5c; oz. 10c.

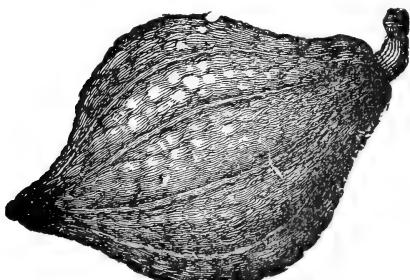
White Strasburg This grows to the largest size and is usable when quite small, thus covering a long season. Four to five inches long and about two inches thick. Very white, crisp and tender. Pkt. 5c; oz. 10c.

Imp. Early Long Scarlet Short Top Of quick growth; color bright scarlet; long, straight and smooth, crisp and tender. Pkt. 5c; oz. 10c.

SQUASH.

The Squash is one of the most nutritious and valuable of all our garden vegetables. Few farmers appreciate the value of winter squash as food for stock. We think an acre of squash, costing no more to cultivate, and much less to secure, will give as much food available for feeding stock as an acre of corn, and we strongly urge our readers to try a "patch" for this purpose.

CULTURE.—The plants are very tender and sensitive to cold, and planting must be delayed until settled warm weather. The general principles of culture are the same as those given for cucumbers and melons, but squash is less particular as to soil. The summer varieties should be planted four to six feet apart each way, and the winter sorts eight to ten. Three plants are sufficient for a hill. In gathering the winter sorts, care should be taken not to bruise or break the stem from the squash, as the slightest injury will increase the liability to decay.



HUBBARD SQUASH.

Hubbard This is a superior variety and one of the best of winter squashes; flesh bright orange yellow, fine grained, very dry sweet and rich flavored; keeps perfectly good throughout the winter; boils or bakes exceedingly dry and is esteemed by many to be as good baked as a sweet potato. Our stock is most carefully selected with regard to quality of the flesh and color and wartiness of the shell but the latter peculiarities are largely determined by the soils in which the squashes are raised. Our customers can plant this variety in

perfect confidence that every fruit will be pure Hubbard. Pkt. 5c; oz. 10c; $\frac{1}{2}$ lb. 20c; lb. 60c.

Orange Marrow A variety developed by selection from the Boston Marrow, and not so large but much earlier, and the earliest of the winter varieties. Fruit deep orange color netted with cream; shape similar to the Boston Marrow; flesh thick deep yellow, of fine quality. Pkt. 5c; oz. 10c; $\frac{1}{2}$ lb. 25c.

Pumpkins.

Pumpkins are not so particular in regard to soil as melons or cucumbers, but in other respects are cultivated the same, though on a larger scale. They are generally raised between hills of corn, but may be planted with success in fields by themselves.

Sweet or Sugar Fruit small and round. A very prolific variety and superior for pies and table use. The skin is deep orange yellow, an excellent keeper. Pkt. 5c; $\frac{1}{2}$ lb. 20c.

Mammoth Prize Wonderfully grand and colossal variety, astonishing every one by its mammoth size and heavy weight. Think of it, a single pumpkin weighing 469 pounds. Notwithstanding its enormous size it is one of the best pie and table varieties. A splendid keeper and exceptionally valuable for feeding purposes. Pkt. 5c; $\frac{1}{2}$ lb. 20c.

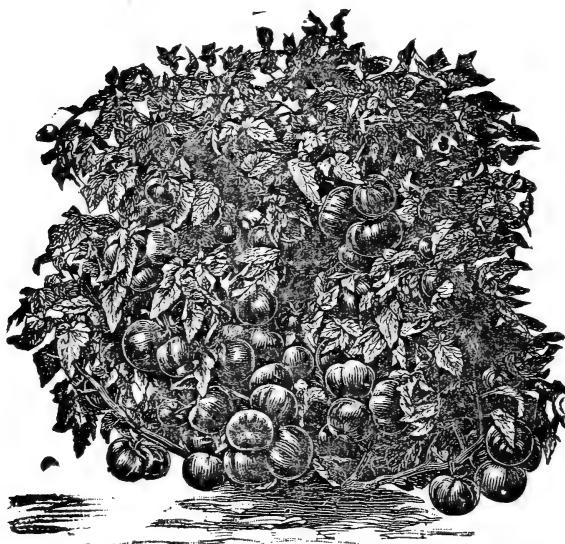
Tomato

Culture.—Tomatoes do the best on light, warm, not over rich soil, and success depends upon securing a rapid, vigorous and unchecked growth during the early part of the season. Sow in hot-beds from six to eight weeks before they can be set out of doors, which is when danger from frost is past; when the plants have four leaves transplant into shallow boxes or cold frames, setting them four or five inches apart; give plenty of air and endeavor to secure a vigorous, but steady and healthy growth, so at the time of setting in the open ground they will be strong and stocky. Even a slight check while the plants are small will materially diminish their productiveness. Set out of doors as soon as danger from frost is over, but before doing so harden off the plants by gradually exposing them to the night air and by the withdrawal of water until the wood becomes hard and the leaves thick and of a dark green color. Transplant carefully and cultivate well as long as the vines will permit. The fruit is improved in quality if the vines are tied to a trellis.

Acme We have given a good deal of attention to the improvement of this variety, and think we have succeeded in making it one of the smoothest and most uniform in size, and earliest of the purple fruited sorts. Vine large, hardy and productive, ripening its fruit almost as early as any, and continuing to bear abundantly until cut off by frost. Fruit in clusters of four or five, invariably round, smooth and of good size, free from cracks and stands shipment remarkably well; flesh solid and of excellent flavor. For market gardeners who want an early, purple fruited tomato, either for home market, or to ship, for private gardens, or for canners, it stands without a peer among its class. This variety is used for planting under glass. Pkt. 5c; oz. 20c; $\frac{1}{2}$ lb. 60c; lb. \$2.00.

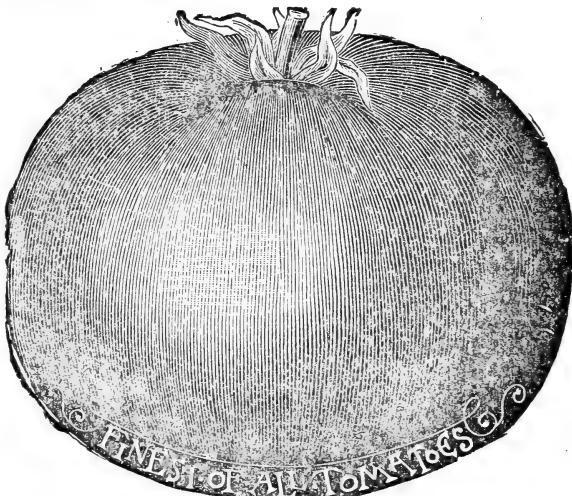
Perfection This is one of the handsomest tomatoes grown, and all who have tried its invariably round, smooth, handsome, red fruit pronounce it of the highest quality. It has been used very satisfactorily for forcing under glass. Pkt. 5c; oz. 2 c; 2 oz. 35c; $\frac{1}{2}$ lb. 60c; lb. \$2.00.

Dwarf Champion This is a purple fruited variety, which forms very stout, strong plants about two feet high. The branches are short, making a bushy plant that stands erect without stakes.



DWARF CHAMPION TOMATO

Stone This is the heaviest and most solid fruited of the large tomatoes of good quality. Our stock is distinctly superior to most of that offered under this name, being more uniform, better colored and larger. Vines vigorous and productive. Fruit round apple-shaped, very large, very deep red in color and astonishingly heavy. Pkt. 5c; oz. 25c; 2 oz. 40c; $\frac{1}{4}$ lb. 75c.



TURNIP

For feeding stock in fall and winter, there is nothing superior to Turnips and Ruta Bagas, as they will yield a larger amount of food than almost anything else on the same space of ground. We cannot too earnestly recommend farmers to increase their sowings largely, for we are sure the crop will prove remunerative.

This wholesome and agreeable vegetable is most easily affected in its form and flavor, by soil, climate and mode of culture. There are a great many varieties, but our list comprises the best for the garden or farm.

Sow in drills about sixteen inches apart, and half an inch deep or sow broadcast, but in either case be sure to have the ground rich and freshly dug. Be careful to weed and thin out, so the young plants will not be checked and injured. Any overcrowding will result in rough and poorly flavored fruit. It is important to get the spring and summer crops started very early so that the

This sort is often sold as Tree Tomato. Fruit smooth, medium sized, color purplish pink, fairly solid, but has no hard core, and is of good flavor. About as early as any purple fruited tomato, and is quite popular in some localities, both for market and home use.

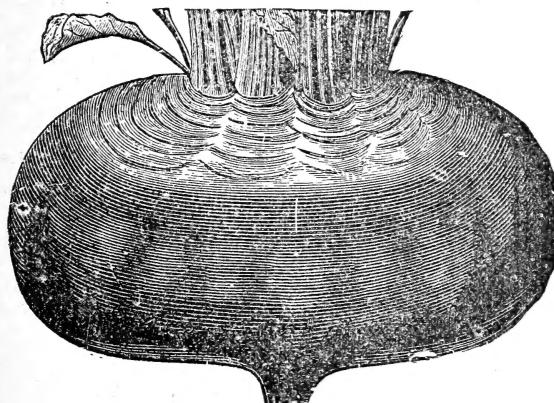
The dwarf habit of the vines makes it very desirable for forcing, as it can be planted closer to the glass, and more closely on the bench than the tall growing kinds.

Our stock is a very superior strain with larger, smoother fruit than the original. Pkt. 5c; oz. 25c; $\frac{1}{4}$ lb. 75c.

turnips may have time to grow to sufficient size before hot weather causes them to become tough and strong.

In middle and western states sow for fall and main crop from middle of July to last of August, and in the manner given for spring sowing. In the field, turnips are often sown broadcast, though in most cases better results are obtained by drill culture.

To preserve turnips in good order for winter, store in a cool cellar and cover with sand or turf to keep them fresh. Another method is to put them in a pit dug in dry soil where there will be no danger of water standing, and to cover with straw overlaid with earth sufficiently deep to keep out frost. Thus protected, turnips will keep well till spring.



EARLY PURPLE TOP TURNIP.

Purple Top

White Globe

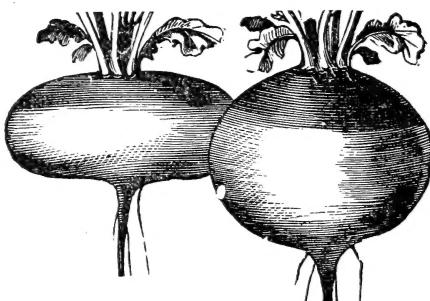
A variety that originated from the purple top flat turnip. It is globular and nearly as large as the Pomeranian White Globe, of beautiful appearance, of most excellent quality, and equally desirable for table or stock. It keeps well and is a fine market sort.

Pkt. 5c; oz. 10c; 2 oz. 15c; $\frac{1}{4}$ lb. 20c; lb. 50c

Early Purple Top

Strap Leaved

This is an early variety and a great favorite for table use; form flat, like a broad disc, and of medium size; color purple or dark red above ground, white below; flesh white, fine grained and tender; leaves few, entire, upright in growth. Pkt. 5c; Oz. 10c; 2 oz. 15c; $\frac{1}{4}$ lb. 20c; lb. 50c.



PURPLE TOP WHITE GLOBE TURNIP

Ruta Bagas or Swedes

Culture—Sow the seed about a month earlier than the preceding varieties of turnips. Ruta Bagas should be sown on ground enriched with well rotted manure, in drills two and one-half feet apart, and should be thinned to six to eight inches apart in the row. Keep the weeds thoroughly in check with the hoe or cultivator, and when the roots have grown full size, and before hard freezing weather, pull them, cut off the tops and store in a root cellar or pit. Ruta Bagas are sometimes sown broadcast and left to take their chances with the weeds and bugs but this method is only successful on new clearing in which there is no weed seed.

Purple Top A large early sort of fine quality. Roots globe shaped, skin purplish-red above ground and yellow below; flesh yellow, necks small; tops peculiar in that their leaves are strap or entire. An excellent variety in every way. Pkt. 5c; oz. 10c; 2 oz. 15c; $\frac{1}{4}$ lb. 20c; lb. 60c.



HOME OF J. R. RATEKIN.—LAWN FROM OUR SEED FIRST YEAR.

THE LAWN.

Thank God for grass! No other glory vies
With the refreshing glory of the grass;
Not e'en the blue of the o'erbending skies,
Nor fading splendors when the daylight dies,
Can this sweet smile of living green surpass.

A nice velvety lawn adds more to the beauty of a place than any other adornment, and even the humblest home may be made attractive with such surroundings, while without a good lawn even the finest flowering plants and elegant arranged bed seem insignificant. How important it is, then to plan for the best lawn obtainable. Do not spend money in sodding a lawn, for it is expensive and is seldom satisfactory. When sod is cut from the roadside or some out of the way pasture, it is poor in quality and full of weeds, and when unevenly laid produces a rough surface which disfigures the lawn. It costs much less to sow the seed and the lawn is far better.

Evergreen Mixed Lawn Grass Seed.

This is a mixture of the best varieties of grass seeds suited for growing together in central and northern states, and will make a beautiful, soft, velvety lawn and as handsome a green as an emerald, and is formed of grasses which keep green from early spring all through the hot, dry summer weather until late in the fall. It comes up quickly (about two weeks) after the seed is sown, and after once up it soon spreads to cover the ground and is ready for lawn mower in six to eight weeks. It roots deeply on any soil and forms a dense, thick turf with no tendency to grow in tufts or clumps. It is permanent, maintaining its beauty for a lifetime, although it is a good plan to give any lawn a top seeding once in every three to five years. This mixture is from new crop, recleaned, pure seeds of the best varieties, well suited for even and permanent growth, as good as money can buy. It cannot be excelled for producing a rich, velvety lawn of beautiful dark green color. Price per qt. (will sow 300 square feet) 25c: 4 qts; 85c, postpaid. By freight, per bushel of 15 lbs., \$2.75; 50 lbs., \$8.00; 100 lbs. (will sow one acre) \$15.00,

Our Special Garden Seed Offer

To better introduce our garden seed business this year we are offering a Special Collection of twenty-five packets of our earliest and best vegetables, postpaid,

For One Dollar

consisting of the following seeds:

- | | |
|--|---|
| 1. Beets—Early Turnip | 13. Onion—Prize Taker |
| 2. Wax Beans | 14. Parsnips—Hollow Crown |
| 3. Cabbage—Early York | 15. Pepper—Large Bell |
| 4. Cabbage—Early Jersey
(Wakefield) | 16. Peas—American Wonder |
| 5. Carrots—Ox Heart | 17. Radishes—Extra Early
(Scarlet Top) |
| 6. Cauliflower—Snowball | 18. Radishes—Chartiers |
| 7. Celery—White Plum | 19. Rutabaga—Purple Top |
| 8. Cucumber—Early Frame | 20. Squash—Hubbard |
| 9. Cucumber—Improved Long
(Green) | 21. Tomatoes—Acme Early |
| 10. Musk Melon—Rockyford | 22. Tomatoes—Stone |
| 11. Watermelon—Cole's Early | 23. Turnip—Purple Top Flat |
| 12. Onion—L Red Weatherfield | 24. Pumpkin—Sugar or Sweet |
| | 25. Sweet Corn—Early Cory |

If there should be some other seeds not included in our Special Collection you should want, we will give you free, 25 cents extra in garden seeds, for all orders over One Dollar. This is on garden seed only.

Remember, all our garden seeds are new and fresh grown in 1901.

**Don't plant seed ten years old
when you can buy new seed at
same price.** » » » »

Address all letters, correspondence, orders and remittances to

**J. R. Ratekin & Son,
Shenandoah, Iowa.**

THE NISHNABOTNA VALLEY.

Greatest Corn Growing District in the Greatest
Corn State in the United States.

Shenandoah Is located on the western line of Page county, bordering into Missouri on the south, and Fremont county on the west, the extreme southwest county in Iowa, and is in the "Great Nishnabotna River Valley." The city has 4,000 inhabitants, is on the main line of the Omaha and St. Louis division of the great Wabash railroad, and on the main line Keokuk & Western, known as the "Burlington Route;" on the Red Oak and Lincoln line of the C. B. & Q., "Burlington System," thus giving Shenandoah the benefit of three trunk lines, and tapping about all the through lines centering into Omaha, Kansas City, Chicago and St. Louis and other intermediate points.

Page County And the 'Great Nishnabotna Valley' have long ago become famous throughout the United States, if not the world, for the corn it grows. Its location, climate and soil all unite and combine to the most perfect growth and maturity of the finest corn the world can produce. As far back as 1880, and before all its broad prairies were broken and brought under the magic hand of man, and the plow, the county of Page, 22x24 miles square, produced the enormous and unprecedented yield of **Six Millions, Two Hundred Thousand, Six Hundred and Thirty-two Bushels of Indian Corn**, as shown by the United States census report; over three hundred and twenty bushels of corn for each inhabitant—man, woman and child resident in the county at that time. This is equal to the combined corn product, the same year, of the following states: Maine, New Hampshire, Massachusetts, Rhode Island and Connecticut, and in addition equal to more than any one of ten other states.

By the above it will be seen that Page county, Iowa, has made an unparalleled record, area compared, with any other county in the United States, or same amount of territory covered in the **wide world** and is justly proud of the name and banner she bears, "The Kingdom of Page, that Grows the Greatest, Most and Best Corn in the World."

See Page 3 for Freight Rates.